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Beloit Patent

?

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PAPER TRADE
ESTABLISHED 1872
JOURNAL

THE INTERNATIONAL WEEKLY OF THE PAPER AND PULP INDUSTRY AND THE PIONEER PUBLICATION IN ITS FIELD

FIFTY-FIFTH YEAR

Published Every Thursday by the
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With Which Is Combined

PAPER

The Magazine of the Paper Industry

Vol. LXXXIV. No. 24 — Thursday, June 16, 1927

International May Secure Corner Brook Mill

Colonial Government Asked to Sanction Option on the Newfoundland Power and Paper Company Property—Purchase Conditional on Legislature Granting Certain Concessions to Purchasers—British Government Consents—Plant Consists of Three Units, Ground Wood, Sulphite and News Print Mills

[FROM OUR REGULAR CORRESPONDENT]

MONTREAL, Que., June 13, 1927.—The papers here have been devoting much space to the news print situation in Newfoundland, where a sensation has been created by an application to the government for sanction of an option on the property of the Newfoundland Power and Paper Company to the International Paper Company of New York. The seriousness of the situation is shown by the fact that the Newfoundland Government is faced with the possibility of having to pay bond interest totalling $267,000 next July without, it is alleged, having received any previous notification from the mill management. The company stated that they were unable to meet the interest. In the contract entered into with the company, the Newfoundland Government and the British Treasury guaranteed the principal and interest of certain loans raised and it is in fulfillment of these obligations that the demand is made.

The Premier in his remarks to the Legislature strongly complained of the inability of the Government to obtain any detailed information respecting the finances of the mills. A message has been dispatched to the Imperial Secretary for the Colonies, asking why Newfoundland should be called on to pay the interest and why it had been "kept in the dark" until now.

Plan for Option

In presenting its plan for the option, the mill management revealed that purchase was conditional on the Legislature granting certain concessions to the purchasers. The exact nature of these has not been made public, but it is well known that certain members of the Cabinet are concerned over their allegedly "sweeping" character, which they fear may involve a "stranglehold" on the future of the paper industry on the island.

The British Government already has given its consent to the proposals. That in itself was considered an added grievance and caused the dispatch of a protest. Colonial authorities complained that the negotiations had reached an advanced stage before they were informed of them.

The news comes as a surprise to news print interests in Montreal in view of the fact that the mills of the company have been producing for almost two years, and, according to recent advices, have been operating at over capacity—400 tons daily—since October of last year. That the output of the plant has been increasingly well taken is evidenced by the figures published by the News Print Service Bureau of New York, which show that, during the first four months of the current year production of 66,218 tons compares with 55,233 tons for the same period of 1926 and 20,942 tons for the first four months of 1925.

The Newfoundland Power and Paper Company was incorporated on July 13, 1923, and started its new mill at what it termed "Corner Brook." As an essential part of the enterprise a power plant had to be developed, and the site for this was chosen at Deer Lake, some thirty-two miles from Corner Brook. The situation of the mill is three miles below the mouth of the Humber River. This is one of the largest in the Island, and has a huge drainage area, extending far into the interior and tapping two of the largest water systems, those of Grand Lake and Deer Lake.

Exactly two years after the work was begun by Sir W. G. Armstrong, Whitworth & Co., Ltd., of London, England, paper was being produced. The capacity of the paper mill is 400 tons of news print daily, while the power plant has a capacity of 100,000 H.P.

The mills consist of three units, one for the manufacture of ground wood pulp, another for sulphite pulp, and the third for the combination of the two into news print.

Storage and Shipping

Two warehouses, each capable of storing 30,000 tons of paper, or a total of 60,000 tons, have been provided, as for several months of the year the company is unable to ship, as its harbor is frozen up. The warehouses each are 594 feet long by 135 feet wide.

The wharf is 39 feet wide by 1,200 feet long, and is arranged to facilitate the rapid loading of paper. The depth of water is 28 feet at low tide.

For the purpose of exporting the paper manufactured by the company, which at capacity would run to 120,000 tons per annum, the company had built two vessels of special construction with a carrying capacity of 5,000 tons of paper each. According to a statement of Mr. Stadler to a Montreal paper, these vessels are built with sides curved to suit the rolls of paper, so that these may fit in without listing during storms, and bruising the paper.

The coal yard has a capacity of 30,000 tons of coal. A conveyor leading from the wharf to the place of storage has a capacity of 100 tons per hour.

The power plant at Deer Lake has a capacity of 100,000 hp. Power is conveyed at a voltage of 66,000.

The pulp wood limits of the company cover 2,000,000 acres, half of them in the Humber River water shed and the rest somewhat to the west, along the railroad. About 2,000 men will be required for logging operations and a good deal of preparation had to be made

(*Continued on page 25*)

Demand for Paper Falls Off in Philadelphia

While Business Generally Has Dwindled Earlier Than Usual This Year, a Seasonal Request is Being Experienced for Some Grades of Paper—Anticipated Improvement Next Autumn Expected to Offset Present Curtailment.

[FROM OUR REGULAR CORRESPONDENT]

PHILADELPHIA, Pa., June 13, 1927.—Except for a seasonal demand in some of the grades of paper the local trade has been experiencing a slower pace of activity with the advent of warmer weather. While there is usually a softening of business with the approach of summer, this year the customary dwindling of demand has been noticeable at a much earlier date than in the past two or three years. That the many industries particularly active at this season of the year have not enjoyed the usual spring time boom because of the belated arrival of warmer weather has been responsible for the dragging business period of the past month or more.

A Lively Fall Anticipated

With the restricted operations of many manufacturing concerns in this city during the spring time paving a way for livelier pace of business in the Fall, the paper trade is looking ahead for greatly improved markets in the autumn months. Stocks on hand among the consumers have been kept at a minimum and buying has been confined to immediate needs, so that when the resumption of business does take place in the Fall there is an assured improvement which will offset the present curtailment. It is believed that the late summer may be the turning point in the upward movement of the paper trade and dealers continue to urge their customers to prepare for the coming brisker months of the autumn at this early date in order to give manufacturers sufficient advance business to prevent delays in shipments that may occur in event of a sudden turn in the tide. Dealers have not been preparing for the future and so are not overstocked at this time. Consumers too, have been cautiously buying for immediate needs only. Manufacturers have been operating as orders were filed and so the industry generallly is safely assured of a steady summer price situation, and the Quaker City dealers are not looking forward to any changes of consequence in values in downward revisions in the near future. It is more likely that some of the grades of papers may be subjected to a higher price movement rather than to the contrary lowering of quotations, in the Fall.

Mills Operate Cautiously

Paper mills in Philadelphia and the State have been confining operation to the needs of the immediate future. There has been a curtailed schedule in many of the fine paper manufacturing plants that now places the mills on from 70 to 80 per cent of capacity. A few of the board mills are operating on full time but the majority of the smaller plants now are confined to a shorter week.

Paper Stock Lagging

The paper stock market follows the same draggy course which has been noted for the past five months. While the dealers are awaiting the turn of the market for betterment, prices continue to sag to the lowest levels since the war days and in many grades values are below those of prewar times. Both rags and paper stock have been accumulating in the warehouses or have been subjected to drastic price concessions in order to clear up the floor space to make way for the numerous incoming offerings of the cheaper grades. The better grades of paper stock and rags are scarce. It is the cheaper lines that have been subjected to the recessions and to accumulation.

Wholesale Waste Merchants Outing

A June day in the wide open spaces that abound the large acreage of ground of the Northeast Shrine Club, at Fox Chase, lured the sixty members of the Philadelphia Wholesale Waste Merchants Association to the annual spring outing of the organization held last Tuesday. Motoring from the city to the Club, the members of the waste trade association joined in a baseball game and then around the dining table enjoyed a dinner of roast beef, which was followed by the quarterly meeting.

The big event of the outing was the matching of the rag merchants and the paper stock dealers on the baseball diamond Teamed into a Rag and Paper Stock nine, with Charles McNichol, captain of the Rag Team, and Harry Bailey at the helm of the Paper Stock team, a tie game was played before the members adjourned to the dining hall. President Thomas A. Kenny, of the Association, presided at the business session following the dinner, and complimented John Costello for his three home runs scored in the game and then paid tribute to William McGarity, Jr., for his prowess with the bat and scoring several hits for the Paper Stock team. Those who were in charge of arrangements were: President William J. McGarity, Sr., of the Penn Paper and Stock Company, and President Thomas A. Kenny, of the International Trading Company.

Wrapping Paper Men Meet

When the June session of the Wrapping Paper Division of the Philadelphia Paper Trade Association met in the Bourse during the week there were present so few members that only routine business was transacted. The meeting was held with Nathan D. Isen, of the Enterprise Paper Company, acting as chairman.

Penn Bag Co. In Larger Home

With the increased space in the larger home recently acquired by the Penn Bag Company, at Water and Dickinson streets, there has been provided for the concern additional facilities for the production of rope paper bags. While the plant has been removed to the large two story structure constructed for the company at the Water street address, the offices are being continued in the old location at 86 Tasker street. The Penn company through its enlarged facilities, is now working on increased schedule in production of bags for heavy products, such as flour, meal, cement, feed and like products. In the new quarters a modern daylight, fire-proof structure of the latest type manufacturing building has been provided along side the Belt Line Railroad where large carload shipments may be made. The Penn Bag Company is affiliated with the Philadelphia Bag Company and has on its official staff the following: President, W. N. Morice; Vice President, Frank M. Underdown; and Secretary and Treasurer, W. S. Ranck.

Advance Bag & Paper Co. New Financing

A $3,000,000 issue of the Southern Advance Bag and Paper Company, Inc., is being offered to the Philadelphia distributors. The new issue of bonds is to provide for the acquisition of property and for the completion of a modern paper mill and bag factory at Hodge, La. The new mills will be built along the same lines as the Howland, Me., plant of the Advance Bag and Paper Company, and will be known as the Southern Advance Bag and Paper Company, a subsidiary of the older corporation, with headquarters at Middletown, Ohio. The new bonds are issued at 99½ and accrued interest to yield over 6 per cent and are callable in 1932. The representative of Boenning & Co., who has been offering the bonds to the dealers here is Horace Hunt, son of James Hunt, head of the Philadelphia Paper Company, on South Front street, formerly associated with his father in the paper industry. He is now connected with the bond department of the financial concern. The Advance Bag and Paper Company has twelve plants already in operation and its products are distributed locally through

the Mather Paper Company. The Boenning Company is meeting with the same success in distribution of the new issue as it did with the flotation of securities of the Scott Tissue Company, which it handled within recent years.

Wolf Bros. Expand

Wolf Brothers have awarded a contract for the construction of the second unit of the present extensive building facilities located at 12th and Callowhill streets, devoted to the production of envelopes, paper cups, millinery and shopping bags and other notion bag specialties, the building program having been arranged during the past week. The new unit to be added to the present large quarters at 330-340 N. 13th street, will occupy a similar area on the plot of ground west of and adjoining the present home. It will consist of four floors and basement of the latest fire-proof factory construction and will have an area of 65,000 square feet of space. The additional quarters were required to take care of the vastly increased business interests of the concern and the many new lines that have been added to the production within recent months. Among the innovations which took place in recent times were the acquisition of the business of the Service Bag Company, of Philadelphia, manufacturers of the patented Handelok Carry Bag, and the Serrated Edge Bag plant devoted to the production of millinery bags, and other notion specialties in containers and bags. By the extension of this large and varied bag assortment, envelopes, bags and other specialties, Wolf Brothers celebrated the Golden Anniversary of the company during the past year. For more than half a century the company has been among the leading envelope and drinking cup manufacturing and paper converting concerns in the Quaker City. The firm has sent out an announcement informing its patrons that it now has a complete service in paper converted wares for department stores, large advertising concerns and kindred lines.

National Metal Edge Box Co. to Occupy New Home

With the completion of the new unit to the Wold Brothers building program, its subsidiary concern, the National Metal Edge Box Company, manufacturers of a patented metal edge shipping container and boxes, will remove to the new location adjoining the old quarters of the envelope and paper specialty company. For many years the National Metal Edge Box Company has occupied the building at 13th street and Callowhill. Having outgrown its present site, there has been provided adequate space in the new structure to provide for the extension of its business. The National Metal Edge Box Company also manufactures besides its patented metal edge containers, box specialties, and box making machinery, and is a pioneer in the metal edge box construction.

R. P. Andrews' York Branch Sold

[FROM OUR REGULAR CORRESPONDENT]

YORK, Pa., June 10, 1927.—The York county court has approved the sale by the York Trust company, ancillary receiver for the R. P. Andrews Paper company, of the local assets of the concern, to S. Walter, Inc., for $39,134.21. No objections had been filed by creditors to the petition as filed about four weeks ago.

The new controlling company will operate the business under the name of Andrews Paper house. It will be a branch of the Philadelphia house. B. R. Moore, who was manager of the R. P. Andrews company, will continue as manager for the Walter people.

G. G. Teren Sails for Scandinavian Countries

[FROM OUR REGULAR CORRESPONDENT]

HOLYOKE, Mass., June 14.—George G. Teren, Assistant Production Manager at the American Writing Paper Company, was honor guest last week at a banquet given him at the Hotel Nonotuck by 25 executives and officials of the company. Mr. Teren sailed Friday for a trip to the Scandinavian countries and will be gone six weeks. He was presented with a "bon voyage" package containing many things useful for the trip together with cigars and candies. He is accompanied by his wife and family.

South Haven Port Opens With English Clay

SOUTH HAVEN, Mich., June 14, 1927.—The S.S. Imacos with Captain T. Guttormsen as master will open the foreign all-water route navigation season at South Haven, Mich., Saturday, June 25, when he docks his vessel laden with 1,300 tons of China Coating Clay from the new Consolidated Mines at Fowey, England.

Although the routing of China Coating Clay has become an established fact and that there is a savings in freight rates is undisputed, this is the first vessel of the 1927 navigation season from foreign ports but it has been stated by representatives of the company that regular shipments via this route will be made throughout the season until the close of lake navigation late in the fall. During the 1926 season part cargoes were unloaded at South Haven, the balance having been discharged at Milwaukee; however, the entire cargo of 1,300 tons was discharged at South Haven. The greater portion was sent to the mills in the Kalamazoo valley while the balance was stored in the Lake Michigan Stevedore Company warehouse.

There is a decided interest in the movement of wood pulp both direct and portions of cargoes being transhipped at Montreal into South Haven by several importers and a large warehouse is being contemplated in order to handle this product at this port.

Because of its geographical location and the destination to the Kalamazoo mills, the movement of importing directly to the consumer is bound to increase.

Requests for information and personal visits have been made to South Haven and all concerned have stated that they will consider South Haven in future shipments. With the available storage at South Haven one of the most serious handicaps to this movement will have been eliminated and a large number of ships other than those already chartered is expected by the port authorities.

Scandinavian Mills To Reduce Output

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., June 14, 1927.—The most important event in the Scandinavian pulp and paper trades is the agreement signed at Stockholm May 4 by the representatives of the Norwegian and Swedish wood pulp grinding mills, whereby a reduction of 200,000 tons will be effected in this year's output. Norwegian mills have an annual capacity of 650,000 metric tons and Swedish mills 550,000 tons, bringing the total for the two countries to 1,200,000 tons. The reduction will be in effect by October 1 and it is expected will create a firmer tendency in the market. So far similar steps have not been taken by the Finnish mills.

One of the chief reasons for the drastic step taken by the Scandinavian mills is the extraordinary situation in the world's news print market, caused by Canadian competition. Activity in the British paper industry has also decreased, resulting in a fall in demand for Norwegian mechanical pulp. Under present conditions it is therefore considered advisable to reduce production rather than increase stocks. The following prices were ruling on the Oslo Bourse on May 4 and May 11:

Sulphite, bleached	per 100 pounds	$3.46 to $4.16
Sulphite, unbleached easy bleaching	per 100 pounds	2.93
Sulphate, unbleached, strong,	per 100 pounds	2.63
Sulphate, easy-bleaching	per 100 pounds	2.87
Sulphate, kraft pulp	per 100 pounds	2.58
Prime moist spruce pulp	per short ton	11.24

Haywood Tag Company Lays Corner Stone

INDIANAPOLIS, Ind., June 14, 1927.—The corner stone of the new home of the Haywood Tag Company at Lafayette, Ind., was laid recently. The honor of laying the stone was conferred on T. B. McGinley, who for many years has been in the employ of the company. He also laid the first brick of the structure. The company manufactures all sorts of tags and labels.

Toronto Paper Business Continues Very Fair

Considerable Activity Experienced in Most Lines of Production—Envelope Manufacturers Reported to Be Only Moderately Busy—Printers and Consumers Gradually Becoming Accustomed To Thousand Sheet Count System

[FROM OUR REGULAR CORRESPONDENT]

TORONTO, Ont., June 13, 1927.—Business in the paper line continues very fair although there has been some slowing down during the past few days. Envelope manufacturers are only moderately busy but other lines of production manifest considerable activity. The new one thousand sheet count basis in the trade has now been in operation for some days and jobbers, interviewed in reference to its application, say that thus far they have had very few kicks. Printers and other consumers are gradually getting used to the new system, which has many features to recommend it. New price lists have been sent out by jobbers showing the old substance numbers and the weight on the thousand sheet basis.

New Appointments Made

William Ellis, who has been general superintendent of the sulphite pulp plant at Smooth Rock Falls, Ont., for some years, has been appointed mill manager by the Abitibi Fibre Company. W. S. Merchant, who is the manager of the woods department, has also been made town site manager in addition to his other duties and F. L. Mitchell will be actively connected with the Abitibi Fiber Company in a consultant capacity.

Permits to Enter Bush

It is probable that the Ontario Government will next year, with the opening up of more motor roads to the north country, require that all tourists and others entering the bush to take out a permit. This system is being used successfully in many parts of the province of Quebec and enables the authorities to keep a check on trappers, summer visitors and others travelling in the district. Permits in Quebec are issued free of charge, simply for the purpose of identification, and it is probable that when they are issued in Ontario next year, the provincial Government will follow this precedent.

J. F. Ellis Celebrates Golden Wedding

John F. Ellis, President of Barber-Ellis, Ltd., manufacturing stationers and wholesale paper dealers, Toronto, who is the dean of the trade in Canada and honorary President of the Canadian Paper Trade Association, and Mrs. Ellis, celebrated their golden wedding on June 5, at their home, 19 Old Forest Hill Road, Toronto. The happy couple were hosts at a reception when many friends called to tender congratulations and best wishes for many more years of happiness. Mr. Ellis has three sons who are associated with him in business and has held many important positions in the mercantile and social life of Toronto and Canada. Mr. Ellis, now in his 82nd year, is enjoying good health and comes down to his office every day.

W. P. Bennett Retires from Business

W. P. Bennett, for many years president of the Rudd Paper Box Company, Toronto, and former head of the Canadian Paper Box Manufacturers Association, has sold out his interest in the business to Victor Donaldson, secretary-treasurer of the company, and will take a long holiday. The retirement of Mr. Bennett is regretted, as he has always upheld the best interests of the trade and established a fine connection with the industry. Many friends will wish him every happiness and prosperity.

Paper Box Men Will Assemble

The Twelfth Annual Convention of the Canadian Paper Box Manufacturers' Association will be held at the King Edward Hotel, Toronto, on Monday and Tuesday, June 20 and 21. B. Sproule, of Toronto, is president of the association, F. A. Fielder, vice president, and S. J. Frame, secretary-treasurer. An interesting program has been prepared. W. Clement Moore, of Wolf & Co., Philadelphia, will give a talk on "Cutting costly competition by controlling costs" while George E. MacIlwain, of the Cambridge Association, Boston, will be heard on "What kind of business shall we have during the last half of 1927?" The delegates will be tendered a civic reception.

Celebration of Confederation

The sixtieth anniversary of Confederation in Canada will be observed in Ottawa by a mammoth parade in which the pulp and paper industry will be well represented. Among the floats, which will take part in the procession, are those of the Canadian International Paper Company, the E. B. Eddy Company, and J. R. Booth, Ltd. Several artists are now at work on the construction of the floats.

Trenton Mill Will Soon Start

The new fifty ton strawboard mill, which has been erected at Trenton, Ont., by the Hinde and Dauch Paper Company, of Canada, of which O. H. Moore, Toronto, is general manager, is practically completed. The company is arranging to get the plant in operation and expects to be running in about ten days. The output will be used in the making of corrugated and fiber boxes at the plant of the company in Toronto.

New Prices on Waxed Papers

The Garden City Paper Mills, of St. Catharines and Merritton, Ont., have withdrawn all prices on waxed papers and a revised list showing an increase will be sent out in the near future. The industry is fairly busy at present and the outlook is considered very good.

Sales Tax on News Print

Since a change has become effective in the regulations regarding the federal sales tax obligations, the question has arisen as to whether the tax at half the regular rate is payable on news print by those who are now obliged to secure a license. In order to make sure of being correct a ruling has been secured from the Commissioner of Excise, Ottawa, which states that a publisher, who has a license, may purchase free of sales tax all materials which are used exclusively in the production of job printing; but on all materials entering into the production of a newspaper (the revenue of which is not taxed) a sales tax of 2 per cent (one-half the regular rate) must be paid. There has also arisen some uncertainty as to whether the $3,000 is supposed to represent the local turnover of the business or only in job printing. It is pointed out that this refers merely to job printing and that no revenue whatever from the newspaper need be taken into account in any way.

Notes and Jottings of the Industry

Walter C. Daley, of the Port Huron Sulphite and Paper Company, Port Huron, Mich., was a caller upon the trade in Toronto during the past week.

E. L. Young, of Norwich, Ont., who was formerly secretary-treasurer of the United Paper Mills, Toronto, but retired some months ago, was in Toronto lately, calling upon old friends in the trade.

Herbert Sims, of Martin's Siding, Ont., who is a well known lumberman and pulp wood dealer, was in Toronto transacting business last week.

Mrs. Willment, wife of F. Willment, Western Ontario repre-

sentative of the Canada Paper Company, Toronto, and family, have gone on a visit to England.

T. Albert Brown, president of Brown Bros., wholesale paper dealers, Toronto, which business was founded by his father over seventy years ago, has been appointed as a policy holders' director on the board of the North American Life Assurance Co., Toronto.

Miss Mabel L. Hornibrook, daughter of John T. Hornibrook, secretary-treasurer of Brown Bros., wholesale paper dealers, Toronto, passed away recently at the home of her father from an attack of acute indigestion.

W. T. Merry, of Oakville, Ont., who is well known in printing and paper circles, and family, are spending the summer months at Centre Island, Toronto.

George R. B. Stokes, of the city sales force of the United Paper Mills, Toronto, was married on June 11 to Miss Margaret Pointon, Toronto. Previous to the interesting event he was presented by the staff of the United Paper Mills with a purse of gold and an appreciative address.

Boston Paper Market Firm

[FROM OUR REGULAR CORRESPONDENT]

BOSTON, Mass., June 13, 1927.—Firm, but generally quiet, is the paper situation, although in some sections of the market dealers in fine papers report considerable improvement in demand this month over that of May. Printers say they are securing a larger volume of business and this increase is reflected in a greater request for paper. Prices remain practically unchanged. Members of the paper trade are apparently much pleased with the resumption of the package form of merchandising after a trial of the thousand sheet plan.

The box board market continues rather quiet, except on specialties, with prices fairly stable on all grades, although there is a softening tendency. Mills are running close on orders, but are able to operate on business coming in from day to day.

In paper stock the condition is steady, with consumers buying in moderate amounts only. Lessened activity is ascribed to the hot weather. On account of diminished demand, Number 1 hard white shavings have declined to $3.15 @$3.30 per hundred pounds, f. o. b. Boston, compared with a previous range of $3.25 @$3.75. Solid ledger stock is now quotable at a range of $2 @ $2.25 compared with a previous price of $2.25.

In domestic rags, roofing stock is keenly sought so that prices have risen on all grades. The No. 1 grade is now quotable at $1.57½ per hundred pounds, f.o.b. Boston, compared with a previous figure of $1.37½; No. 2 at $1.32½ compared with $1.25; No. 3 at $1.22½, compared with $1.12½; No. 4 at $1.12½, compared with $1. Bagging and domestic rags generally, however, are quiet.

News of the Chicago Paper Trade

[FROM OUR REGULAR CORRESPONDENT]

CHICAGO, Ill., June 11, 1927.—The first wave of vacationists has struck and on the resumption of their duties these fortunate individuals will find the trade in an active gratifying state for this period of the year.

H. W. Suter, of the Champion Coated Paper Company, was in the Chicago office last week. W. D. Randall was also in the office this week.

U. D. Simons, of the Vellenbach Corporation, of San Francisco, has announced plans for a straw board plant at Stockton, California, which is a logical location for this industry.

The "Will Art" get-together at Dayton drew a number of Chicago paper men who report this event an absolute morale elevator and in the discussions of business problems much optimism for the future was expressed. Will Nevis and Art Sunderland have made this meeting a much appraised and discussed event among Chicago paper circles. Among those present were: Ed Smith, of Parker-Thomas; Jack Hilyer; H. B. Law, of Dwight-Thomas; and D. W. Pratt, of Butler Brothers.

MAY GET CORNER BROOK MILL

(*Continued from page 21*)

for supplying these men with all the necessaries of life during the cutting season. Steel tugs have been built at Deer Lake and Grand Lake for towing the booms of logs in these areas.

In a place situated like this, far from other habitations, one of the problems that faced the company from the outset was the construction of a townsite. A town-planning expert was engaged and provision was made for extending the town to accommodate 10,000 people. Adequate supplies have been provided of pure drinking water, with proper sewage disposal and other facilities, including a fully equipped hospital. In addition, the company operates a staff hotel, the "Glynmill Inn."

News Print Mill in Far North

A news print mill on the Nelson River, which flows into Hudson's Bay, is the latest proposal, as revealed in an application to the Department of the Interior at Ottawa from a group of Canadian and United States capitalists for a pulp wood berth on the Nelson river of sufficient size to warrant the erection of a mill with a capacity of 400 tons of news print per day.

The application does not state the cordage required, but on the basis of the Manitoba Paper Company's concession, it would mean 8,000,000 cords of pulp wood; an investment of $10,000,000; and a payroll of upwards of 2,000 men.

This is the largest news print development yet planned for Manitoba, and it comes from responsible capitalists who are prepared to put up as high a cash deposit as evidence of their good faith as the Department may require. Mr. Hurlbert, who is an executive officer of the Pine Falls plant of the Manitoba Paper Company, is directly responsible for the application.

The proposal is that the applicants should be given the pulp wood area commonly known as the Nelson river berth, which has been set aside by the department for separate development. With this berth goes the White Mud Falls on the Nelson river, the largest water power site in Canada, not excepting Niagara Falls. A temporary permit to develop White Mud Falls has been granted already by the department to J. S. Menzies, of Winnipeg, but it is understood he has given an option on this permit to the financial group behind the new application. Without the possession of White Mud Falls, no pulp wood development in the Nelson berth is possible since this is the only power source available. At the same time the power site is too large for the news print mill, and will serve as a source of power to the mining areas in the vicinity of the Hudson Bay Railway.

Pulp and Paper Industry in Australia

Definite conclusions have been reached concerning the establishment of a pulp and paper industry in Australia, writes C. Hartlett, office of the Trade Commissioner, Melbourne, to the Department of Commerce at Ottawa. The Amalgamated Zinc (De Bavay's) Limited, Melbourne, have interested themselves in this project, and a site has been located on deep water for the establishment of a very large industry. An area of about 500 square miles of forest has been secured from the Government of Tasmania for a period of ninety-nine years, and also the necessary water rights, transport facilities, and power from the Government hydro-electric plant. As a result of the investigations it has been possible to reduce the estimated cost of production of news print by $10 to $15 a ton, and also a reduction from 10 to 6 hours in the cooking time required in the sulphite process has been secured with a pronounced increase in yield and quality for news print purposes.

Proposed Artificial Silk Industry in Australia

Representatives of Italian interests in artificial silk have recently been in Tasmania with a view to the establishment of the industry, according to the Canadian Trade Commissioner at Melbourne. Arrangements have been made with English underwriters for the necessary capital, which exceeds £700,000. The cost of the building and plant will be in the neighbourhood of £500,000, and it is expected that the number of employees will be 2000.

Boston Paper Trade Holds Annual Outing

Meeting at the Charles River Country Club, West Newton, Is Largely Attended and Is Unusually Enjoyable Affair—Manufacturers Again Win Baseball Match From Merchants —E. D. Bement of Estey Paper Co. Wins Golf Tournament

[FROM OUR REGULAR CORRESPONDENT]

BOSTON, Mass., June 10, 1927.—Nearly two hundred members and guests of the Boston Paper Trade Association attended the annual summer meeting and outing which was held on Tuesday at the Charles River Country Club, West Newton, Mass. Favored with an ideal day and assembled amidst nature's most beautiful scenery those attending were well rewarded for the distances they had traveled to be present at this, the most popular of meetings held annually in the industry.

Changing Personnel

This year's event brought forcibly, to focus, how time is rapidly changing the personnel of the oldest organization of its character in the industry. The ground work laid by its founders is still reflected in the spirit with which the younger members carry on the policies of those who have passed on. Possibly in no other line of endeavor will a stranger enter an environment where is to be found such a spirit of cordiality, and sincerity of friendship as he will find in the atmosphere of the summer meetings of this association. Its reputation for hospitality has long been established in paper distributing and paper manufacturing centers throughout the country, with the result that the summer meetings attract attendants from distant as well as nearby points.

The Golf Tournament

This year's meeting, before its closing business session, developed into a golf tournament where the West vied with the East for possession of the championship Golf Cup, which must be won three times by the same individual before becoming his permanent possession. E. D. Bement of the Estey Paper Company of Worcester and Boston, Mass., captured a leg on the cup and proved that by "keeping everlastingly at it" wins success. He has hopes of some day being the proud owner of the cup.

Rivalry in Baseball

Dating back for several years there has existed a rivalry between the manufacturers representatives and those representing the merchants as to which branch of the industry controlled the best baseball team. The regularity with which the manufacturers teams have won the annual contest, has been looked upon with suspicion by the merchants whose teams were made up of sprightly individuals, who seemed to run fast enough, throw with speed and accuracy and hit them as far as the eye could see. The spectators kept a close eye on the doings of this year's event which the manufacturers again captured, and the consensus of opinion was the "umpire" held the key to the situation, his decisions held, right or wrong, and wrong they would be when the merchants' team's interest were at stake. And he was a merchant, too, and admitted having received thirteen fountain pens during the past several years' outings—but not from the merchants.

Other Interesting Events

The weight throwing contest was won by E. S. Clark of the Hollingsworth & Whitney Company. Quoits was won by the perpetual champion, W. McClellan of Carter, Rice & Co. Corporation, assisted by Bryant McQuillen of Storrs Bement Company. The winners of other events were W. N. Stetson of Storrs Bement Company, first gross in golf; second net going to Perry Von Olker of Von Olker, Snell Paper Company; second gross to F. H. Merrill of Andrews Paper Company

In the Class B Golf, first prize was won by Kenneth Fullerton of Manufacturers Paper Company and second by Jesse G. Swift of W. H. Claflin Company. Kickers prize was won by Walter Muzzy of Proctor Paper Company, while H. C. Scranton captured the guests first prize. The clock golf prizes were taken by Graham Blandy first; P. B. Von Olker and John Blackman were tied for second; third and fourth being taken by F. B. Cummings and W. L. McClellan.

New Members Elected

During the business session at the close of the luncheon, Nelson Feeley of the Strathmore Paper Company and H. E. Lindquist of the Mississquoi Pulp and Paper Company were elected to membership and F. B. Cummings to associate membership.

Among Those Who Attended

Among those present were: Norman Harrower, Linton Brothers Company; John E. A. Hussey, F. Henry Savage, C. H. and C. L. Dodge, International Paper Company; W. F. Evans; Charles Casey, T. Harry Casey and Herbert Casey of Casey, Bigley Company; Bryant McQuillen of Storrs & Bement Company; A. F. Fay; Walter Dobson, of Jordan Card and Paper Company; H. F. Bigelow; H. E. Atterbury, Morgan Smith, R. H. Campbell; Noble O. Hayes, Charles W. Townsend, Harry Gordon, Fred Korbel; Thomas Compton Walsh and E. S. Clark, Hollingsworth & Vose Company; R. L. Lockwood, Old Colony Envelope Company; H. A. Lindenberg; W. H. Loud, Stimpson & Co.; H. C. Upham, Hollingsworth & Whitney Company; R. P. Teele, Liberty Paper Company; Col. Charles S. Proctor, Proctor Paper Company; H. W. Morgan, Merrimac Paper Company; Max Frank, John Carter & Co.; Joseph D. Snell, Von Olker Snell Paper Company; Albert and Donald R. Smith, J. L. Ham and H. C. Ham, of Arthur E. Ham & Sons; John W. Vivian, Cook, Vivian Company; L. E. Maglathlin, D. K. Brown; W. E. Porter, Jr., Cook, Vivian Company; C. W. Fields; J. J. O'Brien, *The Paper Mill;* F. H. Keep, R. C. Sheldon, E. H. Stone, of Stone & Forsyth; Arthur M. Burr, Charles A. Shaw, of Whitney Bros.; Walter M. Pratt, J. Nichol, J. C. Kennedy and C. A. Young, of Carter, Rice & Company Corporation; A. A. Tanyane, PAPER TRADE JOURNAL; H. C. Thayer, W. A. Merrill of Hollingsworth & Whitney Company; M. A. Park, Horace B. Sargent and C. H. Wood of Edwin Butterworth & Company; Charles L. Baird of Baird & Bartlett; C. A. Wiswall, William H. Hilton, U. S. Envelope Company; K. H. Ways, H. C. Scranton, W. N. Stetson, Jr., W. B. Stevenson and E. L. Cummings of Storrs & Bement Company; Arthur E. Pratt, Walter P. Simonds and H. R. Woodward, of Train Smith & Company; W. E. Hervitt, E. F. Russ, F. T. Dolbeare, Great Northern Paper Company; W. D. Thompson, W. W. Binford, Andrews Paper Company; G. L. Webb, New Haven; F. H. Merrill, Andrews Paper Company; Fred Reynolds, S. Barbour, E. D. Bement, Graham Blandy and Charles A. Esty, C. A. Esty Paper Company; F. H. Blackman and J. F. Blackman, D. F. Munroe Company; P. E. Weston and R. B. Rising; J. G. Swift and J. G. Swift, Jr., W. H. Claflin & Company; John A. Wesley, Rhinelander Paper Company; F. H. Von Ullrich; W. Gardner Very, Hollingsworth & Whitney Company; J. B. Jordon; F. Bendil Tracy, Fort Hill Paper Company; Frank B. Cummings; Joseph A. Lowe; E. C. Walker; Herbert W. Robbins; J. B. Kelley; H. C. Fowler; W. L. Muzzey; John F. Kuster, Andrews Paper Company; E. R. Potter; J. L. Munro, Munro, Church Co.; H. E. Lindquist and E. R. Lyman, Missisquoi Pulp and Paper Company.

BIRD MACHINERY

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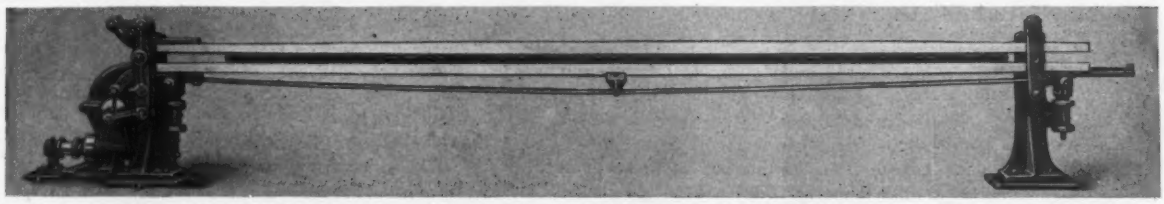

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Increases Production

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Reduces Operating Cost

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BIRD MACHINE COMPANY

South Walpole -:- Massachusetts

Pacific Coast Decides for 1000 Sheet Count

Plan To Go Into Effect August 1—Paper Demand in Los Angeles Reported Slightly Below Normal for This Season of the Year With Collections a Trifle Slow—Recent Canvass Shows Upward of 600 Printing Establishments in Los Angeles

[FROM OUR REGULAR CORRESPONDENT]

LOS ANGELES, Cal., June 9, 1927.—For the past six weeks there have been whispered intimations that possibly things would happen at the annual convention of the Pacific Coast Paper Trades Association which might cause some readjustment in prices for the paper industry in Southern California. Well, the convention now is a thing of the past and no readjustments have materialized and everybody professed to be of the opinion that none will eventuate in the immediate future. Just what events were anticipated at the convention it is impossible to ascertain, but whatever was expected apparently did not occur. In any event things in the paper industry, as far as Southern California is concerned, appear to be running along in the same placid manner they have been pursuing for the last ninety days.

Large Attendance from Los Angeles

An unusually large contingent of paper men from Los Angeles attended the convention at Del Monte and all have returned apparently well satisfied with what occurred there. At least, all expressed the opinion that a mighty good time was had by every body who attended and apparently no sore spots were left in the minds of anyone. Here and there one hears some doubt expressed about the putting the 1000-sheet count into effect. It was decided at the convention to adopt this plan and to make it effective on the Pacific Coast on and after August 1 next. Just how much obligation the individual members of the association assume to make this decision effective is doubtful, in the minds of some of the local houses. However, what differences of opinion may exist regarding the advisability of adopting this plan may be ironed out by August 1.

Trade Little Below Normal

The volume of trade is a little below normal for this time of the year, although it was expected to decline slightly until July 1. It well may be that the normal recession in volume has come a few days earlier than usual this year. If this should be the fact it would be in entire consonance with general business conditions throughout Southern California which appear to be somewhat slackened at this time.

Collections a Trifle Slow

Collections still are a trifle slow with little prospects for an immediate improvement. The larger and more prosperous concerns appear to be meeting their maturities fairly well, but a large proportion of the business done out here is with small merchants and printing establishments, and too many of these appear to be dilatory in meeting their bills. Several times in these despatches mention has been made of the unusually large oversupply of printing plants in Los Angeles. Recently an investigation was made of this industry with the result that it was ascertained that there are at present upward of 600 printing establishments in the city. Even crediting Los Angeles with the utmost in population which its boosters claim for it, namely 1,250,000 this would make one establishment of this character for every 2,000 inhabitants, and it would be only the select 2,000 who would be in a position to support one printing shop profitably. Regardless of the angle from which this situation is viewed it is deplorable, but apparently nothing can be done about it for tne present at least, in the opinion of most observers.

Box Manufacturers to Meet

The next thing on the tapis for the Pacific Coast is the annual convention of the paper box manufacturers. Local members of the association express the opinion that the attendance this year will be very satisfactory and predict in addition that matters of extreme importance to the industry will come up for discussion at the convention. A good deal of thought has been expended upon the program for the proceedings and the committee responsible for drawing it say that practically everything of importance to the industry has been provided for.

Blake, Moffitt & Towne to Build

Announcement has just been made by E. A. Doran, of the Los Angeles Division of Blake, Moffit & Towne, that contracts have been awarded to the McGinty Construction Company, of Phoenix, Ariz., for the erection of a warehouse for Blake, Moffit & Towne on the corner of First and Buchanan streets, Phoenix, Ariz., from which the paper trades throughout Arizona will be serviced. The new warehouse was designed especially to meet the requirements of the paper trade and will be one story in height, 50 x 126 feet in size, and will be of reinforced concrete and brick construction. Spur track facilities will be afforded at the site and the interior of the structure will contain every modern convenience for the expeditious and efficient handling of paper and paper products. The lot owned by the company is sufficiently large to permit of an extension of the warehouse as soon as the exigencies of the business require. Work already has been commenced on the proposed structure and it is expected to be completed by September 1.

Charles Simon Appointed Assistant Engineer

[FROM OUR REGULAR CORRESPONDENT]

CORINTH, N. Y., June 13, 1927.—Charles Simon, of New York City, has been appointed assistant resident engineer at the Hudson River Mill of the International Paper Company and assumed the duties of his new position during the past week. Mr. Simon has been associated with the International Paper Company for a number of years and has had considerable experience with the engineering department. Before coming to Corinth where he will reside during his connection with the Hudson River Mill he was stationed at the New York offices of the I. P. Co.

Another appointment at the Hudson River Mill announced during the past week was that of Charles Dingman, who has been promoted to the position of section superintendent of outside construction. Mr. Dingman has also taken up his new duties and will have supervision over all outside construction work at the Hudson River Mills and other I. P. subsidiaries in this vicinity including the Curtis Pulp Mill.

Kieckhefer Container Co. Buys Paper Plants

MILWAUKEE, Wis., June 11, 1927.—Financing for the merger of the Kieckhefer Container Company, Milwaukee, and the Eddy Paper Company, Three Rivers, Michigan, has been arranged through the Second Ward Securities Company, it was announced yesterday.

The deal, involving over $3,000,000, places the Kieckhefer interests in control of a business producing more than 25 per cent of the solid fiber containers marketed in the United States.

The Kieckhefer business was organized in 1892 as the Enterprise Box and Lumber Company and the present interests have been in control since 1902. The manufacture of fiber containers was started in 1910 and is now over 95 per cent of the company's business. The Kieckhefer organization will have plants at Milwaukee, Wis.; Delair, N. J.; Chicago, Ill.; Honolulu, Hawaii; Oakland, Cal.; Three Rivers and White Pigeon, Mich.

Where Voith Stock Inlets PERFORM

NEWS

Anglo-Newfoundland Development Co. 2
Algonquin Paper Corporation 1
Bedford Pulp & Paper Co. 2
Champion Paper Corporation 1
Cliff Paper Company 2
Consolidated Water Power & Paper Co. 4
Dells Pulp & Paper Co. 2
Escanaba Paper Company 2
Finch, Pruyn & Company 2
Flambeau Paper Company 2
Hennepin Paper Company 1
Holden Paper Company 1
Itasca Paper Company 2
Ft. Frances Pulp & Paper Co. 1
Ft. William Pulp & Paper Co. 2
Minnesota & Ontario Paper Co. 2
Manistique Pulp & Paper Co. 1
Northwest Paper Company 3
Oswego Falls Corporation 1
Price Brothers 3
Spanish River Pulp & Paper Co. 2
St. Regis Paper Company 2
Wis. River Pulp & Paper Co 2
Waterway Paper Products Co. 1
Watab Paper Company 2
Washington Pulp & Paper Co. 1
Inland Empire Paper Co. 2
Brompton Pulp & Paper Co. 1

BOOK

Bergstrom Paper Co. 2
Bryant Paper Company 1
Champion Fibre Co. 2
Champion International Co. 1
Champion Coated Paper Co. 9
Chillicothe Paper Co. 1
Everett Pulp & Paper Co. 1
Jessup & Moore Co. 2
Kimberly Clark Company 6
Miamisburg Paper Company 1
Mead Pulp & Paper Company 7
Peerless Paper Company 1
P. H. Glatfelter Company 1
Provincial Paper Mills 1
Ryegate Paper Company 1
West Virginia Pulp & Paper Co. 5
Watervliet Paper Company 1
Tomahawk Pulp & Paper Co. 1

WAXING

Hammersley Manufacturing Co. 2
Menasha Printing & Carton Co. .. 4
Paul A. Sorg Paper Company 1
Kalamazoo Vegetable Parchment Co. 2
Consolidated Water Power & Paper Co. 1

SULPHITE BOND

American Writing Paper Co. (Geo. C. Gill Division) 1
Eastern Manufacturing Co. 3
Hammermill Paper Company 5
Groveton Paper Company 1
Howard Paper Company 2
Kalamazoo Vegetable Parchment Co. 2
Riverside Fibre & Paper Co. 1
Munsing Paper Company 2
Brown Company 3
Maxwell Paper Co. 1

PARCHMENT

Kalamazoo Vegetable Parchment Co. 2
Paterson Parchment Company 2

CATALOGUE

Champion Paper Corporation 1
Lakeview Paper Company 2
Combined Locks Paper Company 1
Tomahawk Pulp & Paper Company .. 1

KRAFT

Advance Bag & Paper Company 1
Albemarle Paper Mfg. Company 1
Bogalusa Paper Company 1
Brown Company 1
Central Paper Company 1
Warren Manufacturing Company 5
Minnesota & Ontario Paper Co. 2
Frank Smith Paper Company 1
Hummel & Ross Fibre Corp. 1
Nekoosa-Edwards Paper Co. 4
Marinette & Menominee Paper Co... 1
Hoskin Morainville Paper Co. 1
Jaite Company 2
Southern Paper Company 1
Thilmany Pulp & Paper Co. 1
Wausau Sulphate Fibre Co. 2
Wausau Paper Mills 1
International Paper Co.—Bastrop 1

STRAWBOARD

Hinde & Dauch Paper Co. 3

WALLPAPER

Kimberly Clark Company 1
Howard Smith Paper Mills 1

ROTOGRAVURE

Kimberly Clark Co. 2

TISSUE

Detroit Sulphite Pulp & Paper Co. .. 4
Dunn Sulphite & Paper Co. 1
Fort Howard Paper Company 2
Mohawk Valley Paper Company 2
Wisconsin Tissue Mills 1
Port Huron Sulphite Pulp & Paper Co. 1
Rhinelander Paper Company 2
Northern Paper Mills 4

GLASSINE

Diamond State Fibre Co. 1
Glassine Paper Company 1
Hartford City Paper Co. 2
Rhinelander Paper Company 1
Westfield River Paper Co. 1
Warren Manufacturing Co. 1
Deerfield Glassine Company 1

SULPHITE SPECIALTIES

Frazer Company 2
Hollingsworth & Whitney Co. 4
Marathon Paper Company 3
Nekoosa-Edwards Paper Co. 3
Bedford Pulp & Paper Company 2
Warren Manufacturing Co. 1
Kimberly Clark Company 3
Northwest Paper Company 1

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Paperboard Industries Association Meets

In meetings which were well attended and productive of constructive work, members of the Paperboard Industries Association convened at the Congress Hotel, Chicago, May 18 and 19.

In the absence of President J. P. Brunt, Irving Hill of the Lawrence Paper Manufacturing Company, Lawrence, Kansas, vice-president of the Container Group, presided at the general meeting of the three groups. At this meeting there was submitted the report of action and recommendations of the Executive Committee. The report covered the following items: 1. Finances, 2. Program for Summer Meeting, 3. Effort to Increase the Membership; together with other subjects which have been reported in detail to the membership.

The following companies were unanimously elected to membership: O. B. Andrews Company, Chattanooga, Tenn.; Empire Printing and Box Company, Atlanta, Ga.

Sales Promotion Committee's Report

In reporting for the Sales Promotion Committee, Chairman Henry D. Schmidt announced that in accordance with arrangements made by the Committee, Special Representative A. W. Luhrs had met with sales forces of member companies, Chicago, May 13, at which time a detailed report was made covering the Association's sales promotion work. At this meeting a motion picture film was exhibited depicting the packing of paper in fiber containers. Similar meetings will be held in other cities in the near future.

At the meeting on May 19, the Sales Promotion Committee released to member companies the details covering shipping and packing surveys which have been made in two lines of industry, which are large potential users of corrugated and solid fiber shipping containers and folding boxes. The Committee's detailed report, 150 typewritten pages, has been mailed to member companies.

Sales Promotion Representative Luhrs summarized the work carried on during the past two months.

Motion Picture Film

As a part of the Sales Promotion Committee's report, there was exhibited a motion picture film, taken by a representative of the Association which showed the packing of writing paper in fiber boxes; also the packing of the same article in heavy cases; the loading of the boxes in the freight car; the unloading of the boxes by the paper jobbers; and also the successive handling of the paper by the paper jobber and the printer, and finally, the packing of the printed paper in the fiber container for delivery to the printer's customer. Included in the film are titles showing the time required for handling the paper in both wooden cases and fiber boxes, also other pertinent data.

Trade Customs Committee's Report

Chairman W. S. Goodwillie announced that a meeting of the Trade Customs and Practices Committee had been held Tuesday, May 17, at which consideration was given to a recommended trade custom covering the subject of warehousing folding boxes. The recommendations of the Committee had been submitted at the Folding Box Group meeting, and appropriate action thereon had been taken by the Folding Box Group.

Chairman Goodwillie also stated that complaints have been received by the Committee to the effect that salesmen of competitive companies are criticizing the products sold by other manufacturers. He considered it in order for the Sales Managers of member companies to direct their salesmen not to criticize the products of competitive manufacturers. It was the opinion of the Committee that there is a need for higher salesmanship and that the criticism of the product of the "other manufacturer" is poor salesmanship.

Chairman Goodwillie further directed attention to the fact that the recommended cash discount of the industry is not to exceed 1% 10 days; 30 days net.

Specifications Covering "Waterproofing"

The Standardization Committee was requested to give consideration to a posible revision of Specification No. 6, test container board standards, as appearing on page 20 of the Booklet of Standards, which now reads as follows:

"6. Waterproofing:

"A board to be considered 'Waterproof' must, when folded into tray form and suspended, hold water for a period of three hours without showing moisture on the opposite surface, except where sand holes appear."

Chamber of Commerce of U. S. A.

John L. Barchard, President, Hummel & Downing Company, Milwaukee, Wis., attended the annual meeting of the Chamber of Commerce of U. S. A., Washington, D. C., as the official representative of the Paperboard Industries Association. Mr. Barchard's report of the meeting was read, and it was received with interest.

Mr. Barchard was thanked for having atended this meeting, and instructions were issued to include a copy of Mr. Barchard's report with the Minutes of this meeting.

Accounting Committee's Report

Chairman E. R. Hankins, reporting for the Statistical and Accounting Committee, stated the meeting gave consideration to a proposal to enlarge the Association staff so as to render cost accounting assistance to member companies.

A progress report was submitted with reference to statistics which are now being assembled to show a summary of operations in the Paperboard, Container and Folding Box industries during the year 1926. The object of this compilation is to determine the total sales, the total capital employed and the percentage of profit on sales and capital for the industry as represented by the association. Using these figures and applying them to the 1926 census, the approximate totals for the entire country can be had. It is planned to accumulate such figures each year so that the growth of the industry may be gauged.

As a part of the Statistical-Accounting Committee's report, Dr. E. O. Merchant, Economist, submitted an interesting report on "General Business Conditions and the Paperboard Industries." In this report Dr. Merchant referred to general business conditions; the effect of general business conditions upon the paperboard industries, and the outlook for the future.

General Manager's Report

General Manager Browder submitted a report covering the major activities of the Association during the past two months. The report made special mention of the following subjects:

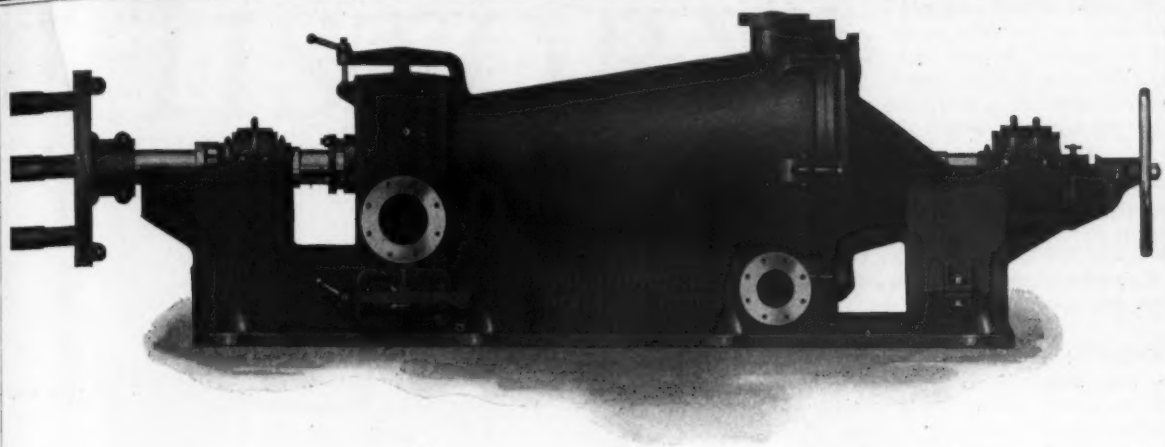
1. Effort to increase the Membership.
2. Traffic and Classification Matters (reported in detail at Container Group Meeting).
3. Relations with American Railway Association, including reference to addresses made by General Manager at Freight Claim Educational meetings held at St. Paul, Fort Worth, St. Louis and Atlanta.
4. Research and Laboratory Reports covering work performed at the Chicago and Rockaway Laboratories.
5. Sales Promotion and Publicity.
6. Observations with respect to General Business Conditions.

Research Committee's Report

Chairman J. J. Brossard submitted a progress report on Research questions, reference being made to stream pollution.

Paperboard Group Meeting

The Paperboard Group Meeting was held on Wednesday



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LANCASTER, OHIO

WATEROUS LIMITED, BRANTFORD, CANADA

Canadian Representatives

morning, May 18, Vice-President W. J. Alford, Jr., presiding. Vice-President Alford submitted an interesting report in which he referred to conditions in the Paperboard Industry and in which he stressed the advantage of up-to-date information regarding the situation in the industry. The meeting gave consideration to mill operation in conformity with the Washington Resolution relating to the elimination of Sunday work.

Stabilization of Waste Paper Supply

Comprehensive reports were submitted by the committees giving attention to this subject. Walter P. Paepcke reported for the Committee in the West, and W. J. Alford, Jr., for the Committee in the East. The Committees were thanked for the work which they have done to date, and they were requested to continue to function and to submit a further report at the July meeting.

Statistical Subjects

Statistical subjects were discussed in detail, and ways and means were suggested for making this branch of Association service of greater value. Certain changes were authorized in connection with the statistics on pulp. This latter report has shown already the unbalanced condition between demand and supply in the pulp stocks.

A progress report was submitted covering the collection of data respecting operations in 1926.

Simplified Practice Recommendation

The meeting gave consideration to a request received from the Department of Commerce for a check of Simplified Practice Recommendation No. 44, relating to boxboard thicknesses. To develop the information required by the Department of Commerce, it has been necessary to send a questionnaire to all boxboard manufacturers, members and non-members. Vice-President Alford urged that members who have not already done so answer the questionnaire promptly. All of the responses are being turned over to the Department of Commerce for use in their work.

Election of Representative

Vice-President Alford was authorized to appoint a Nominating Committee to present nominations at the July meeting for a member of the Executive Committee, representing the Paperboard Group.

Research Subjects

Following the suggestion made by a member, several research subjects of interest to the paperboard industry, were referred to the Research Committee for study.

Folding Box Group Meeting

The Folding Box Group meeting was held Wednesday afternoon, May 18, Vice-President H. S. Hinkle presiding.

Vice-President Hinkle's Remarks

Vice-President Hinkle made some interesting statements with respect to conditions obtaining in the Folding Box Industry, in which he referred to the responsibility of the individual manufacturer and the necessity for conducting business upon a high ethical plane. He commented upon the value to be derived by the members from attending Association meetings.

Increasing the Use of Folding Boxes

A detailed report was submitted showing recent accomplishments in extending the use of folding boxes, all of which is covered in the Minutes of the meeting, which have been mailed to member companies.

Trade Customs—Warehousing

The meeting gave consideration to the adoption of a recommended trade custom relating to the subject of warehousing finished goods. At the July meeting, members will be requested to vote upon the adoption of a recommended trade custom.

Statistical Subjects

Report was made that the Association's statistics now represent 90 per cent of the total tonnage of the entire Folding Box Group. At the July meeting, consideration will be given to still further developing the reports so that conditions in various localities may be seen more distinctly.

A progress report was submitted by Mr. Whiting, Statistician, showing work to date in the preparation of the uniform cost and estimating manual for the folding box industry.

Other subjects discussed at the meeting, on each of which appropriate action was taken, were:

1. Folding Box Group statistical charts and summaries.
2. Depreciation Survey.
3. Research Problems:
   (a)—Starch coated boards.
   (b)—Glassine paper lined board.
   (c)—Adhesives for folding boxes.
4. Summary of Operations for 1926.

Container Group Meeting

The Container Group meeting was held Thursday morning, May 19, with Vice-President Irving Hill presiding.

General Manager's Report

General Manager Browder submitted an interesting report of Container subjects, particular mention being made of the following:

Traffic and Classification Matters

Progress report on Hearings before Consolidated Freight Classification Committee on—

1. Figures to be shown in Circle Certificate of Box maker:
   (A boxmaker's request that the Mullen Test of the facings of corrugated boxes be indicated in the certificate has been withdrawn from further consideration at this time.)
2. Packing Requirements for Fragile Articles:
   (Subject has been handled with the Classification Committee so that any additional changes to be authorized will in no way affect the various types of inner cushioning as now provided for.)
3. Box-Bags as Shipping Containers:
4. Knit Goods in Oversize and Overweight Boxes.
5. Writing Paper, Printing Paper, etc., in Fiber Containers.

Export Trade in Fibre Containers

Co-operation with National Industrial Traffic League in dealing with Steamship Conference Committees—check of shipments on the docks by a representative of the Association.

Bureau of Explosives Matters

Hearing before Interstate Commerce Commission, May 11, and apparent approval of recommended specifications for corrugated boxes for shipment of Paint, Varnish, Shellac, etc., (flash point not lower than 35 degrees F), in metal cans up to one gallon capacity. The effective date and the detailed specifications will be announced later.)

Statistical-Accounting Report

E. R. Hankins reported for the Statistical-Accounting Committee. In connection with the Committee's presentation, Mr. Grafton Whiting, Statistician, reported in detail upon the following subjects:

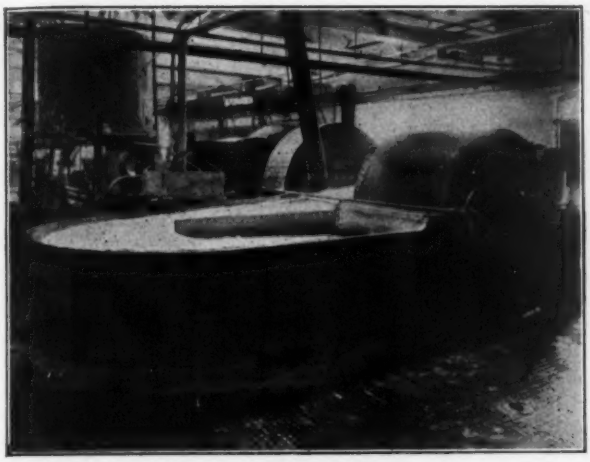
1—Statement of Operations for 1926.
2—Importations of Strawboard.
3—Depreciation Survey.
4—Cost Accounting.
5—Charts and Summaries.

Following the Container Group meeting in the morning, a luncheon was served to all members, and after luncheon, members convened for the afternoon session of the General Meeting of the Three Groups.

The next meeting of the Association will be held in the East on July 20 and 21; Committee meetings will be held on July 19.

The hotel at which the meeting will be held will be announced in the near future.

HISTORY!



Here is an old beater rebuilt into the Dilts approved NEW TYPE. We used customer's old roll, stands, tub ends, bedplates, bedplate box, baseplate, etc. That the results were satisfactory is evidenced by orders for six more rebuilt beaters and *three* new beaters.

One mill on tissue whose largest monthly record was 133 tons (including three Sunday runnings) had *one* of their beaters rebuilt to the Dilts NEW TYPE and made 156 tons the next month without running Sundays.

Read this mill's letter:

> "We expect within a short time we will also have you rebuild our other beater. We are quite satisfied with the results obtained on the first one you rebuilt for us. We find on one grade where our previous tonnage was 10,500 lbs. that we now get 14,500 lbs., due, of course, to an increase in the capacity and also the beating time.
>
> "Ignoring entirely this good increase in tonnage we find that the beater handles the stock much faster. It also delivers the stock to the machine in a far more satisfactory condition than the old beater, and this will allow us to run at greater speeds on our paper."

Many mills have similar histories because many beaters are being built over to the Dilts common-sense NEW TYPE.

You should investigate the many Dilts rebuilding jobs and new installations. You should have the best beaters obtainable because

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Forestry in the Pulp and Paper Industry*

By D. A. Crocker [1]

This opportunity to discuss the place of forestry in the pulp and paper industry is especially welcome because of the interest your Association has shown in the subject. This interest has not been confined to resolutions and conversation, but for the last two years has been evidenced by generous contributions to the work of the Woodlands Section of the American Paper and Pulp Association, and as Secretary of that Section, I am particularly glad of an opportunity to express our appreciation of your financial support and to tell you of some of the possibilities of our work.

The strongest evidence that Forestry has become established in the pulp and paper industry is the interest in the subject which your Association has shown and is continuing to show. You represent the group in the industry which is dealing with its most practical problems and the nature of your work makes your approach to any problem an intensely practical one. I, therefore, take it that you are interested in the practical aspects of forestry for the pulp and paper industry and will try to emphasize this phase of the subject in my paper.

The definition of "forestry" which I prefer to all others is that "Forestry is the Management of Timberlands for the Continuous Production of Forest Crops." I like this definition for two reasons—first, because it emphasizes the continuous feature of forest management and second, because it speaks of "forest crops." The products of the forest are as much a crop as the products of the field although they differ greatly in the length of time between harvests. It is a lack of realization of this fact which has made the general public slow to understand forestry and has made our own and other wood-using industries somewhat slow to see the necessity for the practice of forestry to insure their supply of raw material.

The pulp and paper industry, as it exists today, not only in this country, but throughout the world, has been built up on the utilization of wood. Many attempts have been made to find substitute materials and we are continually reading about the use of corn stalks, various grasses and other fiber plants as substitutes for wood in the manufacture of paper. They now have certain limited uses and may have still others in the future, but those of us who are thoroughly familiar with our industry realize that cellulose is produced in the cheapest and most readily utilizable form in the forest and that there is no prospect of any decrease in the demand for pulpwood, but that the demand will probably increase in nearly direct proportion to the increased demand for paper.

I am not one of those who believe that the pulp and paper industry must be abandoned in the older regions because of the growing scarcity of pulpwood. It is absolutely unnecessary for this to happen. Nevertheless, we are facing a scarcity in some regions and active measures, both governmental and private, must be taken promptly if the industry is not to suffer in those localities.

Consumption Versus Growth

The current impressions as to a future scarcity of pulpwood are based on the fact that the annual consumption of many of the most desirable pulpwood species exceeds the annual growth, particularly in the regions in which the pulp and paper industry has been long established. In the Northeast, for instance, (New England, New York and Pennsylvania,) the 1925 consumption of spruce, balsam and hemlock was approximately 2,500,000 cords and the 1926 consumption, probably reached 2,600,000 cords. In addition, there is an annual cut for lumber and other purposes of approximately 1,200,000 cords of these species, making a total commercial drain of 3,800,000 cords.

Contrasted with this consumption, the present day growth has been estimated by the United States Forest Service, at 1,370,000 cords. In other words, the commercial consumption of these highly desirable pulpwood species in the Northeast, is almost three times the annual growth. This would be a serious situation if there was no hope of an increase in the annual growth. A great increase in the annual growth can be obtained through the practice of forestry and a little later in this paper, I shall try to show you the possibilities of future growth.

The pulp and paper industry in the Lake States has also been built up largely on the supply of spruce, balsam and hemlock found there. We find an annual consumption of spruce and balsam very much greater than the annual growth. The hemlock situation in the Lake States is dominated by the lumber industry and will probably continue to be so dominated for the next twenty-five years. At the present time, the growth of this species is negligible while the consumption for all purposes is equivalent to about 1,800,000 cords.

The Lake States consumption of spruce and balsam, for all purposes, is between 900,000 and 1,000,000 cords per annum, about 90 per cent of this being for pulpwood. The annual growth is estimated at 200,000 cords a year, indicating that the supply of these species in the Lake States is being consumed even more rapidly than in the Northeast.

In the Southern states, we find three distinct problems of pulpwood supply. The first of these concerns the supply of spruce, balsam and hemlock for the sulphite mills. This is primarily a problem for a few individual mills and is being attacked so intelligently by them that I shall only mention it in passing.

The second problem concerns the supply of yellow poplar, basswood, gum, etc., for the soda pulp mills. Here we have a very large potential supply of pulpwood with an annual growth much greater than the present consumption. The complicating feature in this case is the fact that the pulpwood species form a relatively small percentage of the total stand in the hardwood forests of the Southern Appalachians, probably not more than 25 per cent of the total, and it has therefore proved difficult for the mills to obtain an adequate supply of reasonably priced pulpwood within a reasonable distance. It is not so much a question of supply as of the best method of obtaining the supply at a reasonable cost.

The third problem in the South is that of the supply of pine for the sulphate mills. It varies in different localities but generally speaking, there seems no need to fear a shortage of pulpwood, although there are possibilities that too great a concentration of the pulp and paper industry in a particular region may lead to excessively high priced pulpwood in that region, particularly if too great reliance is placed on purchased wood.

It is estimated that with the very inadequate fire protection which is being given the Southern pine lands at the present time, the annual growth of trees now merchantable is approximately 70 per cent of the consumption for lumber and probably more than 50 per cent of the total consumption for all commercial purposes. In addition, there are millions of acres of young pine under commercial size which will reach maturity in from ten to twenty years, if protected from fire, so there seems no reason to doubt that for the Southern pine belt as a whole, the practice of forestry can bring about a proper balance between growth and consumption for all purposes.

What Forestry Can Do

The situation presented above has been known in a general way

*Presented at the annual convention of the American Pulp and Paper Mill Superintendents' Association.

[1] Secretary of the Woodlands Section of the American Paper and Pulp Association.

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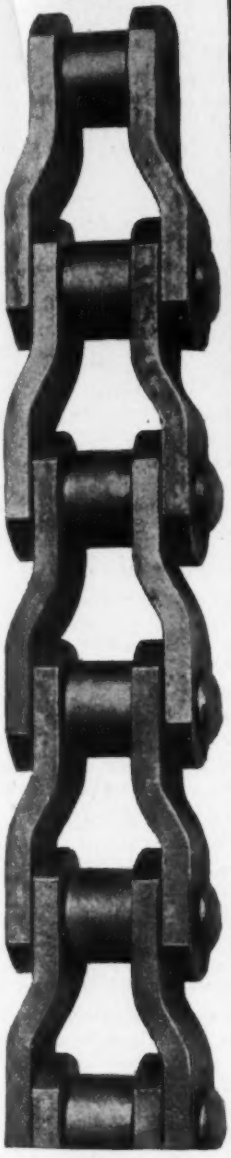

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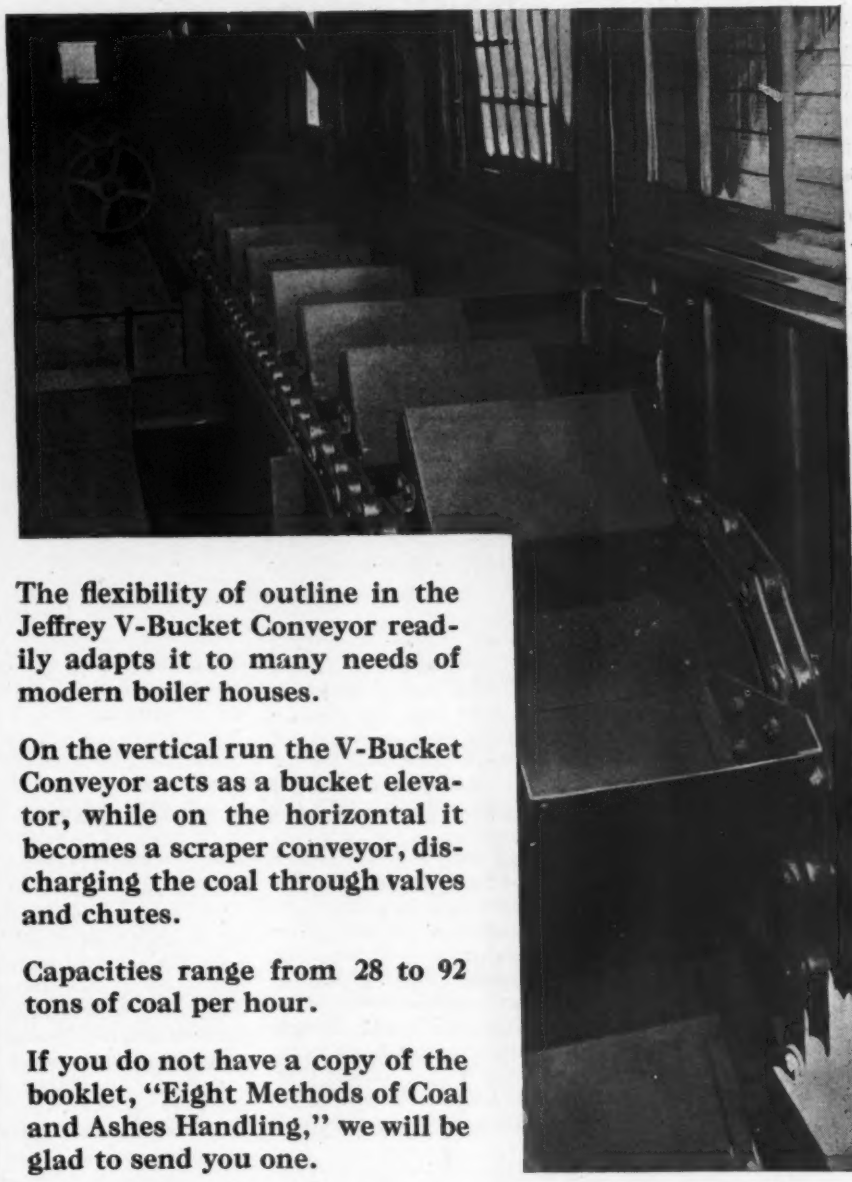

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for a number of years and was the principal reason for the organization of a Woodlands Section of the American Paper and Pulp Association. The leaders of the industry realized that it was essential to know whether its future was to be imperilled by a scarcity of its most important raw material, and that the best and quickest way to answer the question was through our own investigations. The United States Forest Service and other public research agencies have devoted much time to the study of the problem of pulpwood supply, but principally as a part of the general study of the subject of forest depletion and replacement. After all, we are only one of several important wood-using industries and cannot expect public agencies to devote all their time to our particular problems.

By means of the Woodlands Section, the industry has been able to carry on its own investigations, supplementing those made by public agencies and imparting the results in terms of pulpwood supply. I do not want to minimize in the slightest degree the important work done by the United States Forest Service and others, but rather to point out that we can and must contribute to the solution of our own problems.

It is because of the surveys the Woodlands Section has made in the Lake States and in Virginia and North Carolina, and its contacts with the latest developments in other regions, that it is possible to show you in the following portion of this paper that our pulpwood situation is far from being as serious as might be supposed from the present-day ratios between growth and consumption.

The Northeast

At the same time the United States Forest Service estimated the present growth of spruce, balsam and hemlock in the seven Northeastern states at 1,370,000 cords, it also conservatively estimated the potential growth of these species under the intensive practice of forestry by the Federal Government, the State and the private owner, at a little over 4,750,000 cords. This is one and one-quarter times the present total consumption of 3,800,000 cords. In view of the fact that the softwood lumber industry in the Northeast is still declining rapidly and that the rate of expansion of the pulp and paper industry is not likely to be any greater than the rate of decline in the softwood lumber industry, we can look forward to a considerable eventual margin of growth over consumption. The scarcity will come during the next twenty-five years when the present visible supply is still more depleted and the future supply has not yet reached commercial size. When we are dealing with a crop which requires forty years or more to mature, we must plant in decades and generations and although this Northeastern region can produce sufficient pulpwood to maintain the paper and other industries at their present rate and even allow for some expansion, it cannot do so unless prompt action is taken to establish the practice of forestry through the whole region.

The Lake States

In the Lake States, the potential growth of spruce and balsam has been estimated at 1,400,000 cords per annum, as contrasted with a total commercial consumption at the present time of nearly 1,000,000 cords. The margin of possible growth over present consumption is greater than for the Northeast, although the prospects for the immediate future are not quite as good. Director Zon of the Lake States Forest Experiment Station stated in a paper he presented at the Annual Meeting of the Woodlands Section of the American Paper and Pulp Association, that the problem of the supply of spruce and balsam in the Lake States could be solved and that the question of future supply in these states is wholly in the hands of the pulp and paper industry.

A marked improvement in State Fire Protection organizations, recent and prospective forest tax legislation and recent research developments combine to make the Lake States outlook radically different from that of a few years ago. I think that Director Zon was not unduly optimistic and that the greatest problem in this region may be that of getting our industry to realize that its future is not the uncertain one many have believed.

The South

I have already indicated that the question of natural pulpwood supply in the South is not a serious one. The problem of the forester in this region is rather one of devising the best means of providing low priced pulpwood than of finding pulpwood in a region of scarcity. This problem has already been solved by some of the largest manufacturers of sulphate pulp who seem likely to have perpetual supplies of pulpwood from their own lands at a cost no greater than at present, and there is no reason to doubt that other mills can solve the problem in the same way. The soda pulp mills are also meeting their problem intelligently and those who have gone the furthest in their plans for the practice of forestry are the most optimistic in regard to a future supply at a reasonable cost. The ratio between consumption and growth of the soda pulp species in the South is of little or no value, not only because of the fact that the problem is one which must be worked out for the individual mill in competition with other wood-using industries, but also because the seriously depleted condition of the Southern Appalachian forests makes present growth estimates of very doubtful value and we have not yet sufficient data on potential growth to make prophecy safe. We do know that in certain restricted localities where fire has been kept out and cutting has happened to favor the more desirable species, the growth is startling.

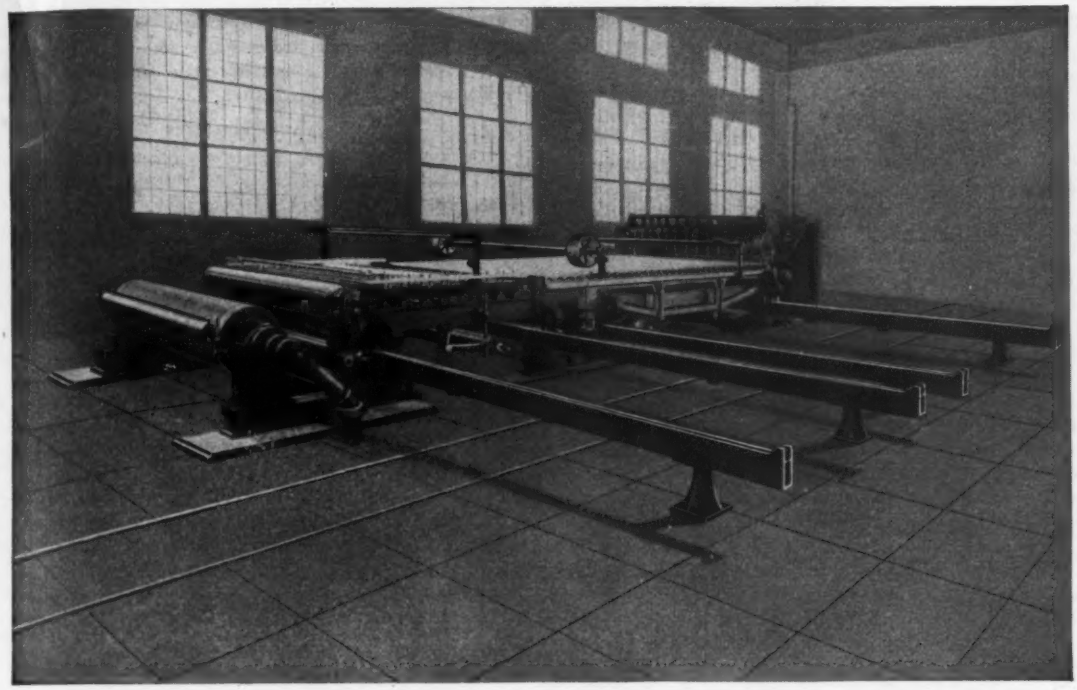
How Forestry Can Solve the Problem

Our Eastern forests, taken as a whole, are in a badly run down condition. They cannot reach their maximum potentialities for growth unless there is concerted action at an early date by all interested agencies. I firmly believe that the pulp and paper industry can and will solve its forest problems with relatively slight assistance from public agencies. Nevertheless, there are certain phases of forestry in which there is a public responsibility as well as a private opportunity and without the full acceptance by the public of its responsibility, the private practice of forestry cannot be successful.

Public Measures

The first of these is adequate fire protection. Although there are certain limited areas in which the private owner may be able to protect his land from fire at a reasonable cost and although the private owner will always find it necessary to supplement state and federal agencies if he is to have protection adequate for insurance, the Federal Government, the State and the local community must cooperate with the private owner to secure the total protection necessary if our forest land is to reach its full producing capacity. This principle has been recognized in our basic forest law—the Clark-McNary Act—but Federal and State appropriations have not as yet been sufficient to make the principle fully effective. The major portion of the burden of fire protection must be borne by the State and local communities and it is here that the greatest room for improvement is found.

A recent publication of the Natural Resources Production Department of the Chamber of Commerce of the United States, ranks the various states according to their accomplishments in fire protection at the present time. Of the thirty-eight forest states in the country, only one has appropriated more than 80 per cent of the funds necessary for adequate protection. Four have appropriated from 60 to 75 per cent and eleven have appropriated from 40 to 60 per cent. Of the remaining twenty-one, only three have appropriated as much as 25 per cent of the necessary amount and all of the other appropriations are less than 20 per cent of the amount considered necessary to furnish adequate protection. Progress in recent years has been rapid and the public is really beginning to realize the necessity for adequate fire protection, but an enormous amount of educational work remains to be done. The pulp and paper industry should use its influence



Inlet Adjustments Undisturbed When Making Wire Changes

When wire changes are made on the Keystone Fourdrinier, the Table Roll and Suction Box Sections are removed independently, as two separate units, and the Couch Roll slid back to provide slack. In removing the sections they are first raised a small fraction of an inch, a pin and a small casting removed and then the sections are lowered onto the rails and rolled out, Since the Table Roll Section is not raised enough to disturb the apron, the inlet adjustments are not affected. Furthermore, the machine rolls back into precisely the same position as it was before the wire was changed and production can be started without making any adjustments.

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to secure efficient action by government agencies in addition to bearing its proper share of the burden of protecting its own lands.

No industry can be expected to grow pulpwood, or any other crop, at a loss. In the past, improper methods of taxation have made the possibility of the profitable production of forest crops seem a remote one. I shall not burden you with details of forest taxation since the situation varies in every state, but will call your attention to the fact that many states have already adopted the method of forest taxation to the character of the forest crop. Next to adequate fire protection, this is the most important public contribution to the practice of forestry and the situation shows every sign of rapid improvement. Among the Southern states, Louisiana and Alabama have been leaders in adopting correct principles of forest taxation.

The third important phase of the public's contribution to the practice of forestry is forest research, including research in utilization. We know that where trees have grown, trees will grow again and in a general way we have some idea as to the rate at which they will grow. We are only beginning, however, to learn the best methods of securing the maximum growth at the minimum expense, whether the forest is a second growth one following cutting, or whether it is artificially planted.

As a concrete illustration of the possibilities of reducing the cost of forest management through research, let me give you an instance with which I am familiar. Several years ago, I was interested in a study of the results and costs of girdling hardwoods to stimulate the growth of spruce in some of the mixed hardwood and softwood stands in Maine. At that time our small scale experiments indicated that the cost of such work would be from $2.50 to $3.50 per acre. Last winter, I listened to a paper by the forester for one of the large pulp and paper companies in the Northeast who has girdled the hardwoods on nearly 2,000 acres. Instead of costing not less than $2.50 per acre this work has been done at an average cost of about $1.20 per acre and the experience gained through this large scale operation indicates that the cost may possibly be reduced even more.

Progressive timberland owners will carry on a certain amount of research of their own but the foundation must be laid by the various federal forest experiment stations and the pulp and paper industry is interested in seeing that these stations secure sufficient funds to push their work forward as rapidly as the character of the problems will permit.

Lack of knowledge has been a powerful deterrent to the practice of forestry in the past. We have been studying the situation intensively for only a decade or two, but it is gratifying to know that a special committee of The Society of American Foresters has outlined a comprehensive program of intensive research which will be of inestimable value to our industry, to all other wood-using industries, and to the general public. This program has been put into concrete form in the McSweeney Bill, which was introduced at the last session of Congress and will be reintroduced this Fall. This bill has been endorsed by the American Paper and Pulp Association and I hope that the Superintendents Association may take similar action.

I need not emphasize to you the excellent work in research in utilization which has been done by the United States Forest Products Laboratory, at Madison. I will, however, remind you that the development of new processes for the utilization of additional species in the manufacture of pulp can prove a very important factor in tiding the industry over a period of shortness of supply, which may come before our forest lands are all on a satisfactory producing basis. Concrete illustrations of this are the increased use of jack pine in the Lake States, the possibilities of using the northern hardwoods for sulphite pulp, the development of the semi-chemical pulping process, the rod mill, etc.

Another public phase of forestry which may affect the pulp and paper business in the East, to a slight extent, is the increase in the area of our state and national forests. It is not certain that these will be primarily devoted to the production of pulpwood or any other forest crop which can be produced in a relatively short time. Also, the total area of state and national forests east of the Rocky Mountains will probably never be very great. Nevertheless, such forests are desirable both as additional sources of raw material and also as large scale laboratories which can point the way to the private owner.

Private Measures

I have shown you that at the present time there are certain regions in which the consumption of the pulpwood species is greatly in excess of the annual growth, but that the growth can be made to exceed the consumption. Let me add that the most recent investigations of growth possibilties for spruce, balsam and hemlock in the Northeast and the Lake States promise even better growth than the forest service originally believed possible under the intensive practice of forestry so that the situation is even more hopeful than might be assumed from the figures I quoted.

The companies which have already assured themselves of adequate supplies of pulpwood for an indefinite length of time, point the way to the rest of the industry. They have found that the intensive practice of forestry enables them to provide for the indefinite operation of their mills at less expense than if they relied on continuing purchases of additional timberlands. In the Northeast, for instance, the present growth in the spruce-balsam region is approximately one-tenth of a cord per acre per annum. Intensive forestry will increase this growth to an average of at least one-third of a cord. Many areas will produce pulpwood at an even faster rate but these must be averaged with less productive areas.

On this basis, a mill consuming 50,000 cords of pulpwood a year, would require 500,000 acres of timberland if it did nothing beyond protecting its holdings from fire. On the other hand, the mill practicing intensive forestry would require 150,000 acres to provide for its present consumption, or perhaps as much as 200,000 acres to allow for expansion and a margin of safety.

The carrying charges on merchantable timberland in the Northeast probably average about $1.00 per acre per year including taxes, interest, etc. The mill which relies on natural growth, therefore, spends $300,000 annually in holding the extra 300,000 acres required for its complete protection. Also, new lands will usually be at some distance from the mill, with consequent higher operating and transportation costs.

The total expense of the practice of intensive forestry probably need not exceed $1.00 per cord per year on the annual cut plus an average of 50 cents per acre for various improvement measures on land which has been cut over in the past and is not now producing up to its full potentialities. In other words, the total expense for forestry measures on 200,000 acres of land would not exceed $150,000 per year while the carrying charges on the extra 300,000 acres would be double that, making a net saving of $150,000 per annum. It would not be practicable or desirable to spend 50 cents a year on each individual acre but rather $5.00 per acre once in ten years. It will not be possible for many companies to immediately place their land in a fully productive condition, so that outside purchases of wood, stumpage or excess land may be required. The saving through the practice of forestry would be reduced proportionately during the period necessary to place the required acreage on a maximum producing basis, but there are very few cases in which there will not be some current saving and the more rapidly the company moves, the more quickly the full saving can be realized. Furthermore, costs will decrease greatly once every acre has been made fully productive.

In the Lake States, conditions are very similar, although the particular measures necessary to make the land produce to full capacity will differ considerably. In both cases, a certain amount of planting may prove desirable on areas which have been made wholly unproductive by fire or other causes. I am not advocating planting for very large areas but suggesting it as a supplement

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to other phases of forest management when, as and if, it will be profitable.

In the Southern pine region the problem of producing future supplies of pulpwood is so simple that a greater percentage of our industry is practicing forestry in this region than in any other part of the country. The few mills which have not yet taken active measures are studying the situation and if action is not delayed too long, should be able to provide for the future at a reasonable cost.

In the mountain region, the small percentage of the pulpwood species in the total stand make integration of the various wood-using industries seem the profitable solution. Desirable lands near the mill which will produce a large volume of pulpwood can probably be purchased in sufficient quantity to provide for a considerable percentage of the mills' requirements but even on the most desirable lands, there will be much timber which the pulp mill cannot utilize. The best possibilities for integration are with the saw mill industry and the mining industry. It is also possible that the future development of various new forms of chemical utilization of wood will help the pulp mill to solve its problems. At the annual meeting of the Woodlands Section, Dr. Rue suggested this as one of the most important factors to be considered in solving the pulpwood supply problem of the Southern Appalachians. It is impossible to make blanket recommendations for a forest region as varied in character as the Southern Appalachians, but, as previously stated, investigations by some mills promise indefinite supplies of pulpwood at a reasonable cost, through the practice of forestry combined with integration with other wood-using industries.

The Possibilities of Utilization

Before concluding the discussion of measures which our industry can take to provide for its future supply of pulpwood, I want to call your attention to the possibilties of the utilization of new species as a substitute for those now considered most satisfactory. You are probably as well informed as to these possibilities as I am but you may not realize their full effect on the future pulpwood supply of the country.

We foresters have demonstrated that we can greatly increase the present growth by relatively inexpensive means. We are dealing with nature, however, and must obey natural laws if we are to be successful and we cannot produce spruce on sites more suitable for hardwoods or if we can produce it, can only do so at prohibitive cost. For this reason, the forester connected with the pulp and paper industry is not only interested in stimulating the growth of certain species on land suited for that purpose, but he is also vitally interested in the possibility that the other species found in a given region can be utilized for pulpwood. This is not only because it will simplify his problems but also because it will materially reduce the cost of forest management.

I do not intend to discuss this problem at length but rather wish to call it to your attention as one way in which the members of the Superintendents Association can be of real service in protecting the future of our industry. Various agencies are continuously experimenting with processes which involve the use of new species and from time to time one of these processes passes from the laboratory to the commercial stage.

I do not ask you to venture into unprofitable experimental fields but do suggest that an open-minded attitude toward the utilization of species now considered undesirable may not only prove profitable in individual cases but may also help to carry the industry through the period of shortage before the intensive practice of forestry has insured our future supply of the most desirable species.

Conclusion

If I have been successful in conveying my ideas to you, I have made you realize that our industry must practise forestry to make certain of its future supplies of raw material at a reasonable cost, and that in certain regions the individual mills must move rapidly if they are not to suffer in the future. Forestry has a place in our industry because it is profitable for our industry. There is no other justification for its practice. The public has certain responsibilities which must be accepted if the practice of forestry is to become practical in all cases. Our industry not only has responsibilties but opportunities which are already realized by some. There will, undoubtedly, be a few laggards who will suffer by waiting until the proper time for action is past, but I believe that these will be few in number and that our industry can be trusted to provide its own future supplies of pulpwood on a profitable basis.

May Build Pulp Plant at Hodge, La.

WINNFIELD, La., June 14, 1927.—The sale of over 100,000 acres of pine timbered lands in Jackson, Bienville and Winn parishes by the Hodge-Hunt Lumber Company to the Advance Bag and Paper Company has been announced. Full details of the sale have not been made public yet. It is not known here whether the paper company acquired all the property of the Hodge-Hunt company or not. The Hodge-Hunt company has operated a large sawmill at Hodge, 25 miles north of here, on the Rock Island railroad for the past 27 years and also a railroad from Hodge to Bienville. It is not known whether the paper company have taken over the sawmill operations or not.

The Advance Paper and Bag Company has had its engineers making a detailed survey of the Hodge-Hunt properties for the past several months. The paper company will begin the erection of a pulp plant at Hodge in the near future. They are establishing offices at Hodge now. The coming of a pulp plant to Hodge is the biggest industrial development that has happened in this section in several years.

News of the Boston Paper Trade

BOSTON, Mass., June 13, 1927.—Many paper dealers are attending the meeting in executive council of the Mill and Merchants Association held under the auspices of the Strathmore Paper Company, today and tomorrow at Woronoco, Mass.

Arthur C. Hall, treasurer of John Carter & Co., Inc., leaves on June 15 for his annual vacation at his camp at Connecticut Lakes, N. H. Mr. Hall expects to be away until after July 4.

Letters have been received from E. M. Davenport, treasurer of the Spaulding and Tewksbury Company, saying that he is enjoying himself in England.

F. W. Powers, manager of the manila department of the Carter, Rice & Co., Corp., who has been ill, is able to come to his office part of the time.

Stone & Andrew have become representatives of the Western Champion lines of the Champion Paper Co.

Middle States Wrapping Men to Meet

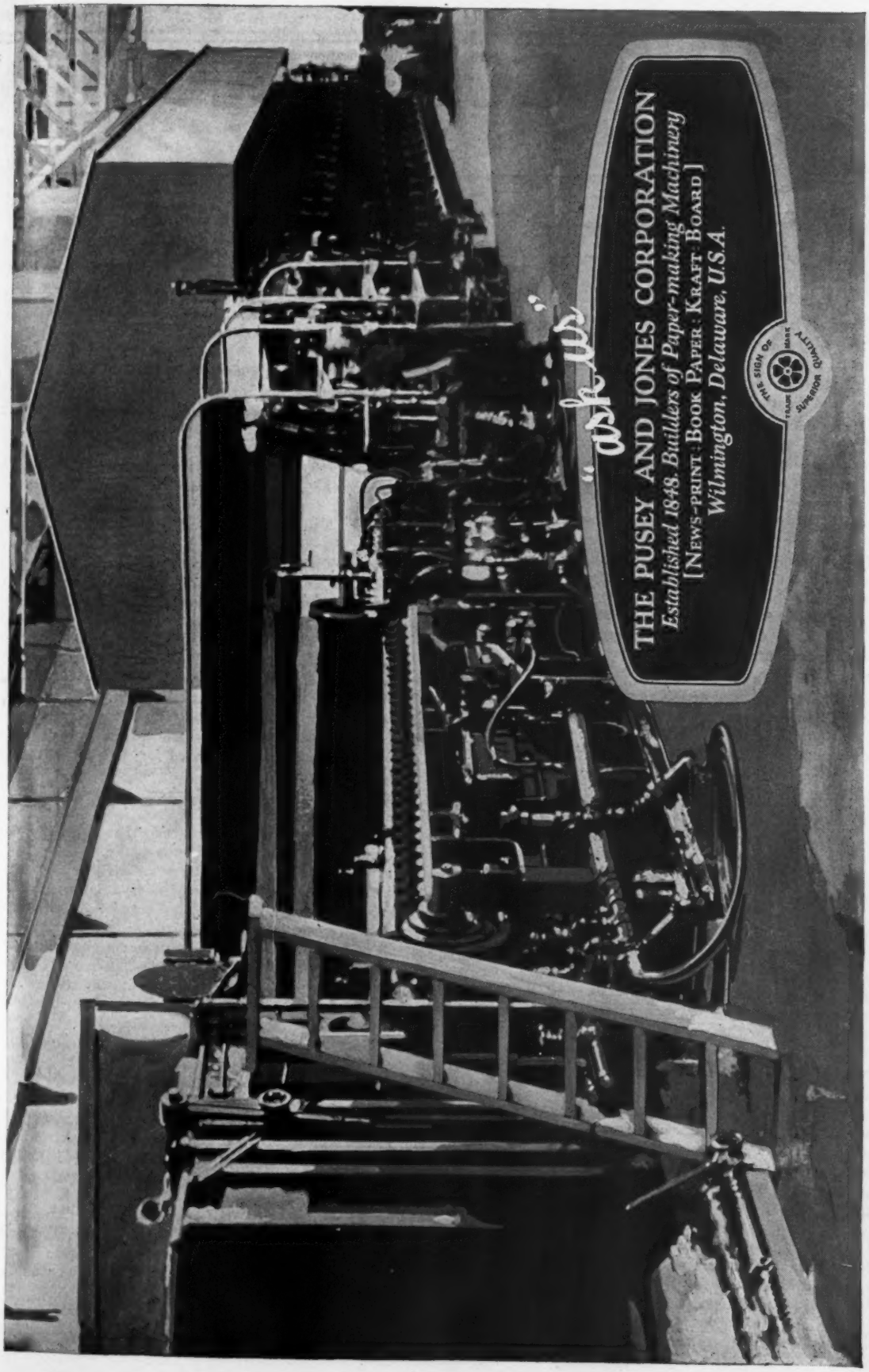
The next regular meeting of the Middle States Wrapping Paper Association will be held June 21 at the Union League Club, Chicago.

This will be a very important meeting for the association, because all of the committees appointed at the last meeting will make their reports on topics such as, Net Profit Control, Mill Relations, Direct Selling by Mills and Discounts on Mill Invoices.

At the last meeting of the association a committee was appointed on Publicity and attendance. Roth F. Herrlinger, vice president of the Union Selling Company, Cincinnati, Ohio, was appointed chairman of this committee.

Falk Corp. Opens Chicago Office

CHICAGO, Ill., June 11, 1927.—The Falk Corporation, of Milwaukee, Wis., manufacturers of herringbone gears, speed reducers, steel castings, Diesel engines and flexible couplings, have opened an office in Chicago at 122 South Michigan avenue. The office will be in charge of C. H. Thomas.


THE PUSEY AND JONES CORPORATION
Established 1848. Builders of Paper-making Machinery
[NEWS-PRINT · BOOK PAPER · KRAFT · BOARD]
Wilmington, Delaware, U.S.A.
THE SIGN OF SUPERIOR QUALITY

Illustrating one of the two 168-inch Bond Paper Machines, designed and built in 1926 by The Pusey and Jones Corporation for Fraser Paper, Limited, Madawaska, Maine.

Entire contents of this advertisement copyrighted 1927 by The Pusey and Jones Corporation, Wilmington, Delaware, U. S. A.

CONSTRUCTION NEWS

A Summary of Vital Facts Regarding Construction, Finances and Operation of Paper Mills

Construction News

Eau Claire, Wis.—The Dells Paper and Pulp Company has awarded miscellaneous contracts for the completion of its new mill addition, now in progress, to be two-story and part basement, estimated to cost approximately $55,000. The work will include remodeling and improving of Mill No. 1. Schafer & Olson, Chippewa Falls, Wis., have the general contract. W. L. Davis is manager.

Camden, Ark.—The Southern International Paper Company, a subsidiary of the International Paper Company, New York, will use natural gas for power service at its new local mill for the production of kraft papers, now in course of construction, and has contracted with the Natural Gas Producing Company, Bastrop, La., to furnish supply. The company will build a pipe line from Morehouse, La., to the plant site, and will also furnish a supply of natural gas for the mills of the Southern International Company at Pine Bluff, Ark., to which point another pipe line will be constructed. The Camden mill is expected to cost close to $5,000,000, with machinery.

Philadelphia, Pa.—The Crescent Box Company, D Street and Erie avenue, has awarded a general contract to Barclay White & Company, 1713 Sansom street, for the erection of its proposed new mill on site lately acquired on Erie avenue, near F street, to be two-story and basement, 80 x 300 feet, estimated to cost about $100,000, with equipment. The Ballinger Company, Twelfth and Chestnut streets, is architect and engineer.

Covington, Va.—The West Virginia Pulp and Paper Company, 200 Fifth avenue, New York, has completed plans for the erection of a new building at its local mill, to be one-story, 70 x 240 feet, designed primarily for storage and distributing service. A railroad trestle, also, will be built. The complete project is reported to cost more than $75,000. A general contract has been awarded to the Morton C. Tuttle Company, Park Square Building, Boston, Mass. Work is scheduled to be placed under way at once.

Jacksonville, Fla.—The American Fibre Company, foot of Robinson street, is considering the early rebuilding of the portion of its plant destroyed by fire, June 7, with loss reported at close to $25,000, including equipment. The finishing department sustained the bulk of the loss.

Racine, Wis.—The Western Printing and Lithographing Company, State street, has awarded a general contract to Olsen Brothers, Racine, for the erection of a new plant for printing, lithographing and paper goods service, estimated to cost in excess of $450,000, with equipment. Plans were prepared by the Austin Company, Chicago, Ill.

Oswego, N. Y.—Taggart Brothers, Inc., Watertown, N. Y., manufacturer of wrapping papers, paper bags, etc., is said to have awarded a contract to the Williams Bridge Company, Syracuse, N. Y., for structural steel framework for its proposed new mill at Oswego, on which work will begin at an early date. The project is reported to cost close to $1,000,000, with machinery. A total of 1,000 tons of structural steel shapes will be required. E. C. Whitney, Oswego, is architect.

Port Huron, Mich.—The Dunn Sulphite Paper Company has completed plans for a new addition to its mill, reported to cost close to $25,000. Additional equipment will be provided.

Philadelphia, Pa.—Wolf Brothers, 12th and Callowhill streets, manufacturer of paper goods, have asked bids on general contract for extensions and improvements in a four-story and basement plant, 95 x 135 feet, location noted, reported to cost in excess of $40,000. Percival M. Sax, Penfield Building, is architect.

Hodge, La.—The Southern Advance Bag and Paper Company, Inc., operated by the Advance Bag and Paper Company, Middletown, Ohio, has completed plans for the immediate construction of a new local pulp and paper mill, to be devoted to kraft stocks. The pulp division will be equipped for a capacity of 100 tons per day and the paper mill unit for corresponding output. The project will also include the construction of a new factory for the manufacture of finished paper bags. A portion of the paper production will be used by the parent company at its Middletown mills. The Southern Advance Company has also taken title to a large tract of timberlands in the vicinity of the mill site, totaling more than 65,000 acres, and will develop for a source of raw material. An additional tract of about 30,000 acres of wood lands in North Louisiana, also, has been taken over. The entire project is reported to cost more than $2,000,000, with machinery. To provide funds, the company is disposing of a bond issue of $3,000,000, a portion of the proceeds to be used for such purpose. John E. Kelley is president.

Chicago, Ill.—Fire, June 6, damaged a portion of the plant of the American Bank Note Company, 118-32 East Twentieth street. An official estimate of loss, reported as slight, has not been announced. The damage will be replaced.

Corner Brook, N. F.—The International Paper Company, 100 East 42nd street, New York, is said to have taken an option on paper mill properties at this place, and permission has been asked from the Government of Newfoundland to take over and operate the mill. The Government has been guaranteeing the enterprise to an extent of $10,000,000. The purchasing company is said to be planning to improve the mills and equipment, and to place in service at an early date for the production of news print.

New Companies, Etc.

New York, N. Y.—The Philadelphia Paper Box Company has been incorporated with a capital of $10,000, to manufacture paper boxes and containers. The company is represented by M. H. Friedman, 135 Rivington street, New York.

Trenton, Mich.—The Story Manufacturing Company has been incorporated with a capital of $296,000, and 4,000 shares of stock, no par value, to manufacture paper and pulp products. The incorporators are Sylvan S. Grosner, Lewis C. Frank, and Edwin M. Rosenthal, 751 West Boston Boulevard, Detroit, Mich.

Wilmington, Del.—The National Paper Can Company, care of the Corporation Trust Company of America, du Pont Building, Wilmington, has been incorporated under Delaware laws with capital of 150,000 shares of stock, no par value, to manufacture paper cans and containers.

Watertown, N. Y.—The St. Regis Paper Company has arranged for an increase in capital from 450,000 to 800,000 shares

WE are pleased to announce that Prof. W. J. Wohlenberg, M. S. (M.E.) of New Haven, Conn., has been retained by us as Consulting Engineer.

PROF. WOHLENBERG has long been prominently identified with scientific and engineering education and is recognized as an international authority on heat transfer and boiler furnace design. Beside being a frequent contributor to the technical press, he is chairman of the Fuels Test Code Committee, A.S.M.E., Honorary Member, N.A.S.E., and a member of the Yale Engineering Association.

THIS further addition to our consulting staff is consistent with our long standing policy of offering to our customers the best obtainable technical knowledge and experience.

ERIE CITY IRON WORKS

ERIE, PENNA., U.S.A.

of stock, the new issue to be divided into 50,000 shares of $100 par value each, or $5,000,000, and 750,000 shares, no par value. A portion of the proceeds will be used for expansion, including the acquisition of the Northeastern Power Corporation, operating in this district.

Pawtucket, R. I.—The National Coated Paper Company has arranged for an increase in capital to $85,000, and 4,000 shares of stock, no par value, for general expansion.

Detroit, Mich.—The Graham Wall Paper and Supply Company has been incorporated with a capital of $10,000, to deal in wall papers and kindred products. The incorporators are Branard B. Kramer, Harold G. Graham and Fred W. Becker, 991 Putnam street, Detroit. The last noted is representative.

Wilmington, Del.—The McCloy Company, care of the Corporation Trust Company of America, du Pont Building, Wilmington, has been incorporated with a capital of $250,000, to manufacture and deal in fine papers, stationery, etc.

Milwaukee, Wis.—The Kieckhefer Container Company, Canal street, has filed notice of increase in capital from $625,000 to $1,437,200, a portion of the proceeds to be used for general expansion, including the acquisition of additional properties. J. W. Kieckhefer is president, and Walter F. Kieckhefer, secretary.

Mineola, N. Y.—The Harper Paper Company has filed notice of company dissolution under state laws.

Miami, Fla.—The Donaldson-Aufford Agency, Shoreland Arcade, Miami, is desirous of getting in touch with manufacturers of corrugated shipping cartons and cases, etc., with view to purchasing requirements.

Paper Concerns File Traffic Complaints

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., June 14, 1927.—The St. Regis Paper Company has filed a complaint with the Interstate Commerce Commission against the Atchison, Topeka & Santa Fe Railway Company. The St. Regis requests the Commission to order the establishment of reasonable rates on news print paper from Norwood, Defereit, Carthage, Norfolk and Raymondsville, N. Y., to destinations in Pennsylvania, Illinois Indiana, Ohio, Michigan, Missouri Kentucky and West Virginia.

A complaint has also been filed with the Commission by the Bedford Pulp and Paper Company, of Richmond, against the Chesapeake & Ohio Railway Company. The company seeks reasonable rates on bituminous coal from New River District mines in West Virginia to Big Island and Coleman, Pa., and claims reparation.

Taggart Brothers Company, Inc., of Watertown, N. Y., have filed a complaint also with the Commission against the Atchison, Topeka & Santa Fe Railway. They ask an order by the Commission requiring the establishment of reasonable rates on paper bags from Watertown, and Carthage, N. Y., to destinations in western Pennsylvania, and Ohio, West Virginia, Michigan, Illinois, Indiana, Kentucky, Minnesota, Iowa, Kansas, Missouri, and other States.

L. L. Brown Paper Company Wins Suit

Judge Morton of the United States District Court for the District of Massachusetts, has recently rendered an opinion in favor of the L. L. Brown Paper Company, of Adams, Mass., in a suit brought against that company by the Byron Weston Company, of Dalton, Mass. The Byron Weston Company charged that the L. L. Brown Paper Company was infringing the Weston patent which covers the method of making flexible hinge paper used by the Weston Company, but Judge Morton, in dismissing the bill of complaint, ruled that the method used by the L. L. Brown Paper Company was radically different from the Weston method, and that it did not infringe the Weston patent. Letters Patent had already been granted the L. L. Brown Paper Company to cover its improved method of making flexible hinge paper.

Paper Featured at Middletown Exhibit

[FROM OUR REGULAR CORRESPONDENT]

DAYTON, Ohio, June 14, 1927.—Though it was impossible to follow the methods of manufacture of paper products in their entirety owing to the miniature exhibits, nevertheless the thousands who visited the Merchants' and Manufacturers' Exposition during the celebration of Progress Week in Middletown this week were given an insight into the way in which paper is produced and in many instances, turned into products of general use.

Here in the Miami Valley the promoters of the exposition pointed out, is produced about every grade of paper in universal use, with the possible exception of news print. Even this grade of paper was produced in the valley at one time in the town wherein the first paper of any kind was manufactured west of the Alleghenies—Franklin, 17 miles south of this city. News print was manufactured there in a limited way until a quarter of a century ago when the other branches of the industry developed so rapidly, especially the fine paper market, that the cheaper news print was overlooked.

However, just why news print never came into general manufacture in the Miami Valley, as in some other paper producing sections, seems odd as trade development shows every other grade of paper has been manufactured and marketed here with profit. Naturally, the best sites for print mills are closer to the supply of pulp wood. Certain men in Dayton and the valley nevertheless are interested financially in print mills and in one or two instances Daytonites are proving to be the leaders in the production and marketing of Canadian print.

Tissues, writings, bonds, kraft, boards and all makes of paper were shown in the exposition given on Broad street, Middletown, this week under the auspices of the Elks and with the co-operation of merchants and manufacturers. The diversity of manufacture in Middletown was surprising, some of the visitors learning for the first time of the great variety of products. It is needless to say the paper trade did not take a back seat. In fact, its very products has given to this progressive town the nickname of "The Paper City" just as securely as Dayton clings to the title of "The Air City."

St. Regis Paper Co. Increases Stock

[FROM OUR REGULAR CORRESPONDENT]

ALBANY, N. Y., June 13, 1927.—The St. Regis Paper Company, of Watertown, through its legal representatives this week filed with the Secretary of State notice of an increase in the number of shares of capital stock from $450,000 to $800,000. The increase is only in the number of shares of common stock of no par value. The number of shares of preferred stock of $100 par value remains the same at 50,000.

The increase in the common stock was recently authorized by stockholders of the corporation as announced last week. The increased capital available from the sale of the new stock is to be used by the St. Regis Company for the purchase of six hundred thousand additional shares of stock in the Northeastern Power Corporation, which will give the St. Regis Company about fifty-one per cent control of the power concern.

Chicago Paper Business Normal

[FROM OUR REGULAR CORRESPONDENT]

CHICAGO, Ill., June 11, 1927.—Chicago merchants are looking toward the summer normal retard with no great alarm and although they are unable to ascertain definitely just what effect the flood in the southern states may have on business in general, they are optimistic in that reclamation and reactivity is manifest in the states of the inundated area. No alarming changes of price have been noted. Buying is slow and in small quantities in all grades but with traces of general interest and increased sales in the future. Production as a whole is very satisfactory and supplying the trade at an ideal rate.

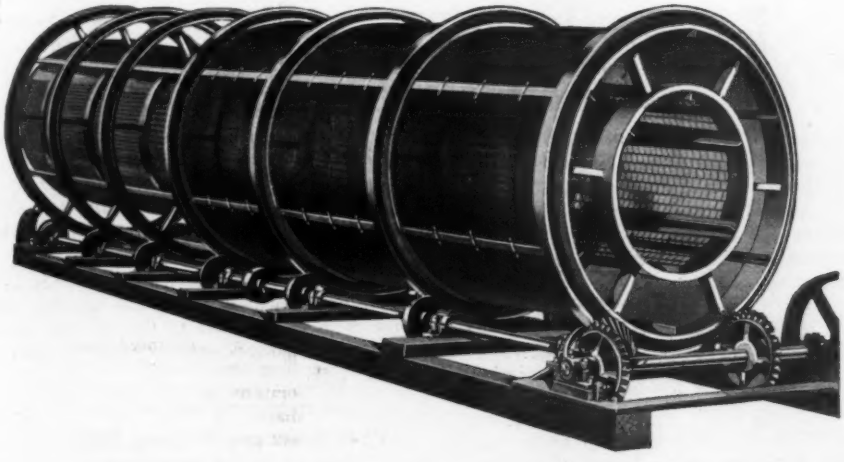
Economical—
Efficient—
Durable—
Carthage Screens

ROTARY TYPE

Less floor space is required and more and better chips are produced with Carthage Rotary Chip Screens than with the old shaker type screen. Carthage Chip Screens operate without noise or vibration.

There's a size to fit your requirements —from the three section Carthage with a capacity of from 40 to 80 cords per 10 hour day (depending upon the speed at which it is operated) to the six section Carthage with a capacity of from 125 to 150 cords, in a like period.

You'll be interested in the special Bulletin with full description. Ask for copy.



Carthage Machine Company

Manufacturers of Pulp and Paper Mill Machinery

CARTHAGE, NEW YORK

BELLEVILLE, ONT., CANADA

989

New York Trade Jottings

Harry W. Draudt has joined forces with Bulkley, Dunton & Co. of 75-77 Duane street, New York, and will actively solicit the mills in the Central Western States.

* * *

Frank Riessman, who for eight years was credit and office manager of the Maurice O'Meara Co., Inc., has been appointed credit manager of the Forest Paper Company.

* * *

J. H. Bloedel, of the Bloedel-Donovan Lumber Company, Bellingham, Wash., who is interested in plans for building a new soda pulp and paper mill on the Pacific Coast, was in New York last week.

* * *

John L. Kaul, of Birmingham, Ala., president of the National Lumber Manufacturers Association, and Edgar P. Allan, director of publicity, Washington, D. C., were prominent New York visitors last week.

* * *

Permanent bonds are now ready in exchange for interim certificates of Oxford Miami Paper Company first mortgage 6 per cent gold bonds, Series A, due February 1, 1947, at the offices of Lee, Higginson & Co., New York, Boston and Chicago.

* * *

G. Frank Steele, the well known news print specialist of 33 West 42nd street, New York, who was formerly secretary of the News Print Service Bureau, has presented to the American Paper and Pulp Association, handsomely bound volumes of the *Paper Mill* and the PAPER TRADE JOURNAL from the year 1910 to date.

* * *

R. S. Kellogg, secretary of the News Print Service Bureau, plans to attend the annual summer meeting of the Technical Association of the Canadian Pulp and Paper Association from June 20 to 25. The meeting will take the form of a tour of the Lake St. John district, in which some of the most important projects in power development and pulp and paper mill construction have been carried out in recent years.

* * *

Dr. Torsten Hasselstroem, Helsingfors, Finland, with Mrs. Hasselstroem, arrived in New York last week to spend a few months in this country investigating the developments in byproduct recovery in chemical pulp mills. Dr. Hasselstroem is well known in Europe, and to a certain extent in this country, for his researches on rosin pine oil and fatty acids in the sulphate black liquor on which he has developed working processes.

* * *

Thomas J. Burke, C. A., secretary-treasurer of the Cost Association of the Paper Industry, left for Chicago last Saturday on the Twentieth Century to attend the convention of the National Association of Cost Accountants at the Palmer House, Chicago, June 13, 14 and 15. Following the convention, Mr. Burke proceeds to Munising to attend a meeting of the Wisconsin Local Division of the Cost Association. Mr. Burke also plans to visit the various Wisconsin paper mills and will return to headquarters at the end of the month.

* * *

A new issue of $3,000,000 Southern Advance Bag and Paper Company, Inc., first mortgage 6 per cent twenty-year sinking fund bonds is being offered at 99½ and interest, to yield more than 6 per cent, by Peabody, Houghteling & Co., Inc., New York. The bonds are callable as a whole or in part prior to June 1, 1932, at 105, at 104 for the next three years, at 103 for the next three, and at 102 until maturity. The bonds are guaranteed as to principal, interest and sinking fund requirements by the Advance Bag and Paper Company, Inc.

In connection with the construction of three power plants on the Gatineau River, Canada, by the Gatineau Power Company, a subsidiary of the International Paper Company, the latter company announces that early offering will be made in the United States and Canada of an additional issue of $15,000,000 of 7 per cent cumulative preferred stock. The power plants which the power concern is constructing will have, when completed, a generating capacity of more than 530,000 horsepower, the company stated. Two of the plants are now in partial operation and the third is expected to start operations in the fall of 1928.

* * *

To set at rest rumors that the International Paper Company or its Riordon subsidiaries are to make rayon yarns (artificial silk) A. R. Graustein, president of the International Paper Company, has issued an official statement that the company is not entering the field of rayon manufacture and has no financial interest in any company making rayon yarns. The sole interest of International in the rayon field is producing and marketing Kipawa sulphite wood cellulose for making high grade rayon. The output of pulp specially made at the Kipawa Mill of the Riordon division of the International Paper Company now supplies a large proportion of the total world's consumption of wood cellulose by makers of rayon yarns.

Hauling Waste Wood for Longview Fibre Co.

[FROM OUR REGULAR CORRESPONDENT]

PORTLAND, Ore., June 10, 1927.—The first raw material to be used by the Longview Fibre Company in its huge plant now under construction in Longview, Wash., was hauled to the site June 1 Two one-cord trucks will be employed continually night and day up to October 1 when it is expected that the mill will start operation, at which time 10,000 cords of waste wood will be on hand.

The construction crew on this plant broke all records when they speeded up the work so that now it is evident that the opening will be three months ahead of schedule which was at first set for January. More than 225 men are now working on the building in day and night shifts. The digester building in which four digester tanks will be installed, rises to the height of a seven story building. In the diffuser building 12 diffuser tanks are installed and half of the 10 causticizing tanks are in place, besides the various miscellaneous smaller tanks necessary to operation.

The first week in June more than 400 tons of machinery was received at the public dock from the Henry S. Grove boat.

Construction is well under way on the pumping plant located over the Columbia river dike, which will lift the millions of gallons of water over the dike and into the tanks. The large tank just inside the dike is in place.

Boiler house plans have been completed and work is under way on the foundations and structural steel of the building, which will extend from the main building out to the 307-foot smokestack. This smokestack has the name "Longview Fibre" painted in black in letters nine feet high.

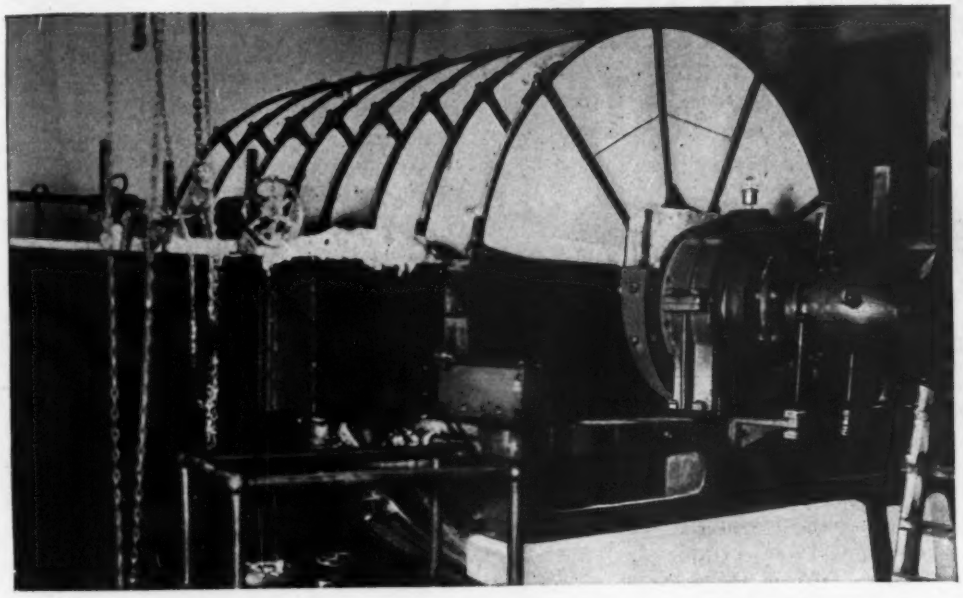
Visit American Writing Mills

[FROM OUR REGULAR CORRESPONDENT]

PHILADELPHIA, Pa., June 14, 1927.—The American Writing Paper Company was host last week at its Holyoke mills to several of the salesmen of the Richie-Howarth Paper Company, one of the Eagle-A service houses.

The party was driven to Holyoke by Hayward Beatty of the Philadelphia Office of the American Writing Paper Company, the fine weather and beautiful route taken, making a very enjoyable trip.

Those making the trip were Messrs. Blessing, Markeley and Clearwater of the Richie-Howarth Paper Company and Tom Williams of the Williams Printing Company of Frankford. The thorough inspection of the Windsor Locks Division and many of the Holyoke plants was of exceeding interest.



The first American Filter in the mill of the Abitibi Paper and Pulp Company.
The success of this unit led to the installation of two more American Filters.

Combining White Water Savings and Sulphite Stock

General Uses For American Filters

Groundwood Deckers or Thickeners
Sulphite Deckers or Thickeners
White Water Save Alls
Combined Sulphite Deckers and Save Alls
Combined Bleach Washers, Deckers and Save Alls

Considerably more than 40,000 sq. ft. of filter area carried by American Filters has already been ordered or installed for the above purposes.

CAN the mill balance be kept under control if various white water savings are combined with sulphite stock?

One of the leading Canadian sulphite mills believed that such an arrangement would not only be practical but beneficial.

These engineers backed their judgment by installing two large American Filters as combined deckers and save-alls.

The underlying principle is that in as much as fiber losses are fairly uniform in quality and quantity, their recovery is likewise uniform.

If in addition, the recovering apparatus—the filter—is arranged to deliver pulp of uniform consistency, mill balance is at all times under control.

As a matter of fact, plans are well advanced for building mills around American Filters as the "key machines".

UNITED FILTERS CORPORATION

Main Office and Laboratory: Hazleton, Pennsylvania

New York Chicago Salt Lake City Los Angeles
Export Office: 25 Broadway, New York Code Address: Unifilter, New York

PAPER TRADE JOURNAL
ESTABLISHED 1872
With Which Is Combined
PAPER
The Magazine of the Paper Industry
HENRY J. BERGER, Editor

Member A. B. C. Audit Bureau of Circulations

Vol. LXXXIV New York, June 16, 1927 No. 24

PAPER EXPORTS DECREASE

Exports of paper and paper products from the United States during April fell below those of either the preceding month or April, 1926, according to the Paper Division of the Department of Commerce.

All classes excepting boards and a few paper specialties contributed to this decrease, with the heaviest losses falling in shipments of news print and surface-coated papers. Exports of book paper showed some improvement over the preceding month but were at the same time nearly 25 per cent under those of the corresponding month in 1926.

Board shipments during April, including building papers and wall boards, were in most instances above those made during March and almost without exception above those of the corresponding month last year. The most notable increase in this group occurred in shipments of wall boards which exceeded the previous month's shipments by 25 per cent and those of April, 1926, by approximately 175 per cent.

Exports of greaseproof and waterproof papers, towels and napkins, papeteries, boxes and cartons, and vulcanized fiber manufacturers in all cases reached a higher volume than during the corresponding month last year.

Exports of paper and paper products during April totaled $2,361,841 in value, a decrease of 7 per cent in comparison with the aggregate value reached during March or during April, 1926. In addition to paper and board shipments, $499,306 worth of paper base stocks were also sent abroad, consisting chiefly of sulphite pulp and rags and similar stock.

Receipts of paper, paper products, and paper base stocks at United States ports during April also registered a decrease amounting to 5 per cent for the former and 21 per cent for the latter in comparison with the preceding month and 10 per cent and 21 per cent respectively compared with April, 1926.

The heaviest reduction took place in incoming shipments of standard news print which show a decline from 150,413 tons (long ton of 2240 pounds) in April, 1926, to 148,689 tons during March and 131,907 tons during April, 1927.

Imports of most other classes of paper and paper products fell off during April, although owing to increases in a few lines, and especially cigarette papers and paper boxes and cartons, aggregate imports (excluding standard news print) exceeded in value March receipts by 16 per cent and April, 1926, receipts by 11 per cent.

Imports of all classes of paper and paper products during the month of April reached a value of $11,317,487, of which amount news print represented $8,803,160 and other paper and paper products $1,514,327.

Imports of paper base stocks show an almost consistent decline during April as compared with either of the other two months under discussion. The only exceptions to the general downward trend occurred in incoming shipments of pulpwood and groundwood. In both these items, however, April receipts fell below the level of the preceding month while exceeding those of April, 1926. The heaviest decreases were registered in rags and waste bagging which fell off 40 to 50 per cent compared with a year ago. There was also a heavy decrease in receipts of unbleached sulphite pulp, while bleached sulphite shows a slight increase in comparison with the corresponding month last year. Imports of kraft pulp (unbleached sulphate) were 20 per cent under those of the preceding month and 22 per cent under April, 1926.

The total imports of paper base stocks during April were valued at $7,220,707 as compared with $9,243,663 during March and $9,120,159 during the corresponding month last year.

FRIENDLY COOPERATION

Before attempting to discuss the question as to whether there is a satisfactory basis for friendly cooperation with foreign manufacturers of pulp and paper, it may seem necessary to answer the more fundamental question as to whether it is necessary or wise for the American Paper Industry to have a friendly contact of any kind with foreign pulp and paper manufacturers. In other words, are we entirely sufficient unto ourselves as to raw materials and markets to the point that we can afford either to consider ourselves able to maintain a policy of isolation and through such a policy continue in our development without foreign raw materials or to do without foreign markets for our finished products? It would seem as though the question as to our dependence upon raw materials from foreign countries had already been answered by the increasing use of foreign wood, pulp, clay and casein during the past ten years. If we must buy abroad, it is reasonable to assume that it would be as advantageous for us to maintain the same sensible, friendly contact with those from whom we buy abroad as we seek to maintain with those from whom we buy at home.

Over-production in the paper industry is a condition and not a theory only. The solution in part of the problem of over-production is the stimulation of a satisfactory and permanent foreign market. There is a foreign market for American paper and paper goods now even though the American paper industry as a whole has given little recognition to the fact. Certainly, the question of holding and increasing the foreign market is worthy of consideration, in view of the continued sale abroad of more than two million dollars' worth of American paper and paper goods *monthly*. In the case of one small foreign country only, it is interesting to note that since 1915 our exports to Sweden have increased 349 per cent and our imports from there 364 per cent. Pulp and paper of course form only a part of these exports and imports.

We are disliked abroad. This is due in part to jealousy, so commonly evidenced by those who are poorer and weaker than we are.

It is due in part also to our own lack of friendliness or our unwillingness to understand and appreciate the social and business life and customs of our neighbors abroad. One has but to read such an enlightening article as that by Mr. Frank H. Simonds in the August, 1926, number of *American Review of Reviews* to appreciate what expert observers are reporting from nearly all of the larger European countries. The last paragraph of Mr. Simonds' article is startling and should cause American business men particularly to consider the grave importance of more satisfactory relations with those from whom we buy or to whom we wish to sell in foreign countries. Mr. Simonds states: "Nor can we fail to perceive that in all this chaos, dislike, distrust and even downright hatred of America grows and spreads in European minds. (The idea of) American responsibility for European troubles is becoming more and more firmly established."

The old saying that if one is to have friends one must be friendly applies as much in commercial and international relations as in our personal contacts. Can there be any question but that the paper industry in this country has got to do business for years to come with foreign countries? If this is a fact, and it would seem as if it must be so recognized, then it would appear to be to the advantage of our industry to be friendly with foreign manufacturers.

As a result of efforts made by representatives of the American Paper and Pulp Association and by individual paper manufacturers who have visited Europe in the last few years, it is increasingly evident that the Association has come to stand in the minds of foreign manufacturers as representing the American paper industry.

Europe is slowly swinging into a new era of industry. Labor costs are tending to go down, as are general production costs in this new era of intensive competition.

American industry is faced with the competition of foreign manufacturers not only for foreign markets but also for our own domestic markets as well. We need a foreign market for our paper. It may come in time to mean as much to us as a foreign market now means to Canada. To gain new foreign markets and to hold them we must see that every condition is made as favorable as possible—not only credits, lower costs of transportation, etc., but that our contacts are as friendly and personal as possible.

The efforts of the American Paper and Pulp Association to develop a friendly basis of understanding with Scandinavian manufacturers, particularly, have already brought the Association and the industry in this country much that is worth while and of direct benefit. While the European manufacturers of pulp and paper are of course our competitors, and while our dealings with them must be on the keenest business basis, yet there is no reason why we cannot carry on the business which we apparently must carry on abroad on a friendly basis. There is not an American manufacturer who has visited the pulp and paper mills of Scandinavia, particularly, who has not been either helped or inspired by the experience, and for this reason alone if for no other, it would seem as though the question asked at the beginning of this statement, that is, "Is there a satisfactory basis for cooperation with foreign pulp and paper manufacturers?" must be answered in the affirmative.

And in all of this business that we are doing in the way of purchase of supplies abroad, it would not be out of place to repeat the fact that the foreign market for American paper is bound to be of continually greater importance to the American manufacturer. No one who understands modern methods of merchandising would be ready to say that two million dollars' worth of foreign business a month is the upper limit for our industry.

The markets of the world are open to the paper industry of the United States. An understanding of these markets and organized effort to secure and hold them are needed to give the paper industry the place it deserves in world markets. We can do business abroad on a friendly and, therefore, a more profitable basis if we but control our contacts abroad with foresight and wisdom.

Brotherhood Arranging Wage Schedules

[FROM OUR REGULAR CORRESPONDENT]

ALBANY, N. Y., June 13, 1927.—Representatives of unions associated with the paper making industry will attend a conference in Watertown late this week with officials of the St. Regis Paper Company at which time matters relative to wages and working conditions will come up for discussion and it is expected that new agreements will be signed covering a period to May, 1928. The old agreement between the St. Regis Company and the International Brotherhood of Papermakers expired last month and delay was experienced in arranging a conference looking to the adoption of a new agreement because of the absence of officials of the St. Regis Company.

H. Edmund Machold, of the St. Regis Company, conferred with representatives of the International Brotherhood of Papermakers at his New York office early last week at which time the date for the Watertown conference was fixed. The St. Regis Paper Company will be the last of the papermaking concerns operating under agreement with the Brotherhood to sign new agreements covering wages and working conditions to next year.

William R. Smith, president of the Brotherhood, was in Northern New York last week and conferred Thursday with representatives of the Unity Paper Company in Potsdam. Later in the week he met with officials of a few other concerns including the Degrasse Paper Company, of Pyrites, and final details of the new agreements were worked out satisfactorily.

Because of numerous changes and adjustments effected this year in the wage and working agreements the work has been considerably delayed. Practically all of the old agreements expired between May 1 and May 15. President Smith has traveled several thousand miles during the past two months covering the papermaking towns of the United States and Canada and with the signing of the St. Regis Paper Company new agreements will be effective with all mills, many of these calling for wage increases either directly or through reduction in working hours.

Riordon Make Rayon Wood Cellulose Not Rayon Yarns

To set at rest rumors that the International Paper Company or its Riordon subsidiaries are to make rayon yarns, (artificial silk), A. R. Grausteini, President of International Paper Company, has issued an official statement that the International Paper Company is not entering the field of rayon manufacture and has no financial interest in any company making rayon yarns. The sole interest of International in the rayon, (artificial silk) field is producing and marketing Kipawa Sulphite Wood Cellulose for making high grade rayon. The output of pulp specially made at Kipawa Mill of the Riordon Division of the International Paper Company now supplies a large proportion of the total world's consumption of wood cellulose by makers of rayon yarns.

J. W. Johnson To Retire

INDIANAPOLIS, Ind., June 14, 1927.—J. W. Johnston, a salesman in Indiana for the Messenger Paper Company, of Chicago, Ill., announced on his recent trip through the territory that this will be the last trip for his firm. He has been a regular caller on the northern Indiana trade since October, 1879, and believes he has merited a rest. He will retire to Hoopston, Ill.

MATHIESON Industrial Chemicals

What Is A Testimonial?

THE year 1927 may be remembered by the readers of advertising as "The Testimonial Year". On the pages of all types of periodicals, the reader sees testimonials to the merits of many different advertised products. And who is not impressed by this direct testimony as to quality!

But the Mathieson organization depends for testimonials upon quite a different source. It prefers to consider every repeat order a testimonial—an unwritten one, it's true—but nevertheless, a testimonial to the proven quality of EAGLE-THISTLE Liquid Chlorine.

Repeat orders are born of customer satisfaction. Contract renewals are made only where and when there is confidence in the supplier—and only when past experience has furnished grounds for a continuation of that confidence.

The features of Mathieson service that have made EAGLE-THISTLE the most used brand of Liquid Chlorine in the world have also inspired those unseen testimonials—the repeat orders—that speak so eloquently of the character of Mathieson Chlorine and Mathieson service.

CAUSTIC SODA
LIQUID CHLORINE
BICARBONATE OF SODA
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SODA ASH
BLEACHING POWDER
ANHYDROUS AMMONIA
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Works: Niagara Falls, N.Y.—Saltville, Va. Warehouse Stocks at all Distributing Centers

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Section of the
Technical Association of the Pulp and Paper Industry

AN ORGANIZATION FOR THE ENCOURAGEMENT OF ORIGINAL INVESTIGATION AND RESEARCH WORK IN MILL ENGINEERING AND THE CHEMISTRY OF PAPER, CELLULOSE AND PAPER-MAKING FIBERS GENERALLY; IT AIMS TO PROVIDE MEANS FOR THE INTERCHANGE OF IDEAS AMONG ITS MEMBERS IN ORDER THAT PROCESSES OF MANUFACTURE MAY BE MADE MORE EFFICIENT AND IMPROVED ALONG TECHNICAL LINES.

Conducted by W.G. MacNAUGHTON, Secretary

The Determination of the Copper Number*

By Dr. Carl G. Schwalbe, Member of TAPPI, Eberswalde, Germany

In contrast to the simple sugars, the polysaccharides do not possess reducing properties. Very pure starch does not reduce Fehling's solution, and highly purified cotton cellulose only to a slight extent. If the polysaccharides are hydrolyzed with acids, then the reducing property manifests itself in the form of a precipitate of cuprous oxide from Fehling's solution and is a characteristic index of hydrolysis. Similar to the formation of dextrines upon the hydrolysis of starch, cellulose dextrines appear to exist when cellulose is hydrolyzed. Further degradation leads to glucose. To the hydrolysis products of cellulose also belong the hydrocelluloses, which Vignon claimed possessed no reducing property. In 1907, Schwalbe[1] showed that not only oxycelluloses, but also hydrocelluloses, possess a characteristic reducing property which is a measure of the degree of hydrolytic degradation or oxidation. Besides glucose, which exists in small amounts as a result of the hydrolysis of cellulose by dilute acids, the previously mentioned cellulose dextrines are apparently formed, or the glucose is firmly bound by adsorption to the cellulose and can be washed out only with great difficulty. The possibility also exists that water-insoluble dextrines react in contact with Fehling's solution and precipitate cuprous oxide. These considerations lead Schwalbe to investigate whether the reducing property could not be quantitatively determined by boiling Fehling's solution containing cellulose fibers. The reducing power is not due alone to hydrolyzed cellulose; oxycelluloses, if present, are also reduced, so that there is the possibility that the degree of oxidation of cellulose can be estimated by a determination of the reducing power. The field of application for such an analytical method is found in digestion and bleaching processes. Impairment of fiber strength by excessive hydrolysis in the cooking process can be estimated, and the quantity of oxycellulose formed by the use of an excess of bleach solution can be expressed numerically. It is not possible, however, to determine the degree of hydrolysis or degree of oxidation by themselves after cellulose has been exposed to the action of both hydrolytic and oxidizing agents. The value obtained in this case represents the reducing power caused by both the hydrocellulose and the oxycellulose present in the sample. The problem then resolves itself to an empirical method which can be carried out in practical manner.

Hydro- and oxycelluloses are formed layer fashion on the cellulose fiber. These layers are boiled off by the Fehling's solution in the determination of the reducing power. The theoretical assumption must be made that Fehling's solution penetrates deep enough in the fibers to react with all reducing substances. Altogether the determination of the reducing power appears to be a very simple affair. The material containing reducing substances is boiled with Fehling's solution and the separated cuprous oxide can be quantitatively determined by any method and calculated as copper. The amount of copper so obtained, referred to 100 g. cellulose, is the "copper number." The copper number method has become very well established in the cellulose industries. The expert is in a position to judge from the copper number alone the quality of the cellulose and even to predict the viscosity of cellulose solutions. It is not surprising, therefore, that we have been disturbed by numerous improvements which have been suggested for a very useful method. These improvements relate to the apparatus, the procedure, and the estimation of the cuprous oxide. These factors should be discussed, therefore, in the light of recent literature.

The Chemicals in Fehling's Solution

Fehling's solution is composed of copper sulfate, sodium potassium tartrate (Rochelle salt), and sodium hydroxide. The copper sulfate usually obtained in the chemical market is of sufficient purity. This unfortunately is not true of sodium potassium tartrate, which can be purchased on the market in very different grades. Even with a blank test, which implies boiling the Fehling's solution in the absence of fibers, cuprous oxide will precipitate. It has been shown that the oxalic acid content of the sodium potassium tartrate can be the cause for this self-reduction. Grades of sodium potassium tartrate of the maximum purity possible must be used, therefore, or at least a correction factor for the self-reduction of the Fehling's solution must be employed in the calculation of the copper number. The fact that many technical grades of sodium potassium tartrate of commerce are unsuitable, has not yet been generally considered, but, nevertheless, this is of extraordinary significance to the results.

With regard to the use of sodium hydroxide as a constituent of Fehling's solution, the doubt has been expressed as to whether this comparatively strong sodium hydroxide solution—it is employed in the concentration of 1 to 2 per cent—could not hydrolyze the cellulose at the boiling temperature and consequently too high copper numbers might be obtained.

As a matter of fact, sodium hydroxide of this concentration is able to hydrolyze cellulose. If a 2 g. sample in an alkaline sodium potassium tartrate solution, which contains 17.3 g. sodium potassium tartrate and 3.89 g. sodium hydroxide in 50 cc., is boiled for 15 minutes at the usual concentration of 300 cc. and thereafter

* An address delivered before the Berlin Section of the German Association of Pulp and Paper Chemists and Engineers, Feb. 25, 1927. Translated from Papierfabr., 25, 157-160, Mar. 13, 1927, by John L. Parsons.

[1] Schwalbe, Z. angew. Chem., 20, 2166-2172 (1907).

50 cc. copper sulfate solution and 1.11 g. sodium hydroxide are added and then boiled for 15 minutes, a copper number of 2.09 is obtained, while the normal copper number amounts to 1.6. The quarter of an hour period of alkaline hydrolysis, therefore, has brought about an increase in the reactivity.

Apparatus and Procedure

The original apparatus for the copper number determination consisted of a round flask with a condenser suspended in its neck. A stirrer was inserted through the condenser and the heating was done by a gas flame. This arrangement has been found to be inconvenient by many people, so that numerous modifications have been made.

In heating with a gas flame a fact is very often overlooked, namely, that a very uniform warming with a Pilz burner is advisable, if not necessary. Overheating of the sides of the flask may give erroneous results, because the Fehling's solution, which is spattered on the hot container walls by the stirring motion, is decomposed and thereby gives an occasion for an increase or a decrease in the copper number values. Protection against overheating can be easily obtained by employing a piece of asbestos sheet[2] cut to a size corresponding to the diameter of the flask. Particular care should be observed in the stirring, so that the motion is not too vigorous and drops of the Fehling's solution are not spattered above the level of the liquid.

There is also the proposition of employing an oil bath or a calcium chloride bath for more uniform heating. But with an oil bath there is the danger of the oil frothing over owing to the presence of drops of water and the manipulation of a round flask covered with oil is not very agreeable. This is also true of the calcium chloride bath. A round flask immersed in solid calcium chloride is not convenient to handle.

The proposal to use a water bath for heating is a distinct change from the original procedure, because the highest temperature obtainable in a water bath is from 92 to 94 degrees C., which is not the boiling temperature. In all applications of Fehling's solution the directions state that it must be heated to the boiling point.

The stirring motion due to boiling causes the fibers to be continually exposed to fresh Fehling's solution. This appears to be entirely necessary because a water-insoluble substance is reacting with Fehling's solution and must be brought into the most intimate contact with the normal concentration of the solution. It the substance is allowed to rest in the Fehling's solution, then in the vicinity of the fibers there is deficiency of the reagent; in the meanwhile, the Fehling's solution is consumed but not in proportion to the reducing power of the fibrous material. By boiling the solution and agitating the mixture with a stirrer, the concentration of the Fehling's solution is kept uniform and, through the motion of the fibers, diffusion of the reagent in the cell membrane is favored. There are pulps, of course, which are so easily disintegrated that they yield a uniform suspension without stirring. But there are other pulps in which the fiber bundles are not easily broken up and the material tends to mat. For such limiting cases, stirring offers a safety factor. Staud and Gray[3] are of the opinion that with continual stirring, but with an extension of the boiling period to 45 minutes (instead of 15 minutes), the use of a water bath for heating purposes appears to be sufficient in the determination of the copper number. This may prove to be correct for individual pulps, but whether this simplification of the procedure is permissible can only be decided after a large number of samples have been tested.

The Determination of Cuprous Oxide

When pulp fibers are boiled with Fehling's solution, cuprous oxide is formed. According to the original method of procedure, this substance was filtered off and dissolved in nitric acid after suitable washing, and then determined electrolytically in the nitric acid solution. It is well known that the values so obtained required a correction, if, as was almost always the case, the fibers possessed the property of adsorbing Fehling's solution. Not only cuprous oxide was fixed on the fiber and was incapable of being washed out, but also so-called "hydrate copper." The value obtained for the copper number, therefore, was too high (uncorrected copper number). A correction must be applied for the hydrate copper. This is done by placing the fibers in the cold Fehling's solution for a definite time, thoroughly washing, and dissolving the copper adsorbed by the swollen cellulose with nitric acid. The copper can be determined electrolytically. The value for the hydrate copper is subtracted from the "uncorrected copper number" to obtain the "corrected copper number."

This procedure is open to the just objection that it is too bothersome. Under the conditions, the solution of the cuprous oxide by means of nitric acid is difficult. Above all, electrolysis in platinum dishes for factory control work is too expensive. To be sure, platinum dishes can be replaced with platinum wire gauze. Furthermore, the nitric acid solution of copper can be applied in the ordinary methods of gravimetric analysis and the copper estimated in the form of copper sulfide or copper oxide. Also it is evidently possible to dry the fibers loaded with cuprous oxide, ash them, and determine the copper in the residue in the usual way. This analytical procedure always requires comparatively much work and, besides, increases the time considerably that must be used for the copper number determination.

The Schwalbe-Haegglund Copper Number Method

In 1919 Haegglund[4] proposed a desirable improvement of the original method. He suggested that the cuprous oxide should be determined according to the method of Bertrand[5] commonly employed in the sugar industry. The cuprous oxide reacts with ferric sulfate to form ferrous sulfate which is estimated volumetrically with potassium permanganate. Thus, by this method the determination is made more rapid and the use of expensive electrolysis apparatus can be omitted. There is also the further advantage that the determination of the hydrate copper is no longer necessary to obtain the "corrected copper number." The cuprous oxide only can react with ferric sulfate, and the amount of Fehling's solution retained by adsorption does not enter into the reaction.

The procedure of Benesch[6] is similar but was offered at a later date. It has also been employed in the sugar industry. The method of Adanti,[7] applied to sugar, has been used for pulp fibers.

Staud and Gray[3] also use the titration method. They are of the opinion that a likely but undesirable formation of copper oxide can be avoided by employing the previously mentioned method of heating in a water bath. This side reaction naturally indicates the source of a considerable error in the direct determination of cuprous oxide.

The Schwalbe-Schandroch Method

The difficulties just mentioned are eliminated by Schandroch,[8] who does not determine the cuprous oxide but rather the unconsumed copper oxide in the form of copper sulfate. He uses the method employed by Haen-Low for the estimation of copper, in which an aliquot portion of the unconsumed copper sulfate is converted to copper iodide by adding potassium iodide after acidification of the solution with hydrochloric acid. By this reaction one atom of iodine is freed for every atom of copper present. The iodine can be titrated in the usual way with sodium thiosulfate. The process of determining the copper number by this method should be shortened considerably and be carried out in three-quarters of an hour.

In this way Schandroch avoids the very tedious careful washing of the fibers. Naturally we must be certain that no cuprous oxide in the colloidal condition is suspended in the copper sulfate solution, which fact has been noted here and there. Under this condition, however, the solution assumes a characteristic brown

[2] Schandroch prefers heating on a 3-4 mm. thick copper plate. Compare Papierfabr., 23 43 (1925).
[3] Staud and Gray, Ind. and Eng. Chem., 17, 741-745 (1925).
[4] Haegglund, Papierfabr., 17, 301-305 (1919).
[5] Bertrand, Bull, soc. chim., 35, 1285 (1906)
[6] Benesch, Chem.-Ztg., 48, 861 (1924).
[7] Adanti, Boll. chim. farm., 55, 33-35.
[8] Schandroch, Papierfabr., 23, 43 (1925).

color by reflected light. The turbidity can be removed for the most part by filtration through kieselgur.

The Schwalbe-Braidy Method

Braidy[9] has objected to the original procedure for determining the copper number on the ground that it is bothersome, that it gives difficultly reproducible values, and that the sodium hydroxide in the Fehling's solution exerts a deleterious effect on the fibers. He has proposed, therefore, to abandon the use of Fehling's solution and to apply a copper solution containing sodium bicarbonate and sodium carbonate.

The use of such a solution should yield smaller copper numbers for standard cotton cellulose of very great purity and give a method which is more sensitive. The published analytical results, which concern the investigation of cotton cellulose, show that finer differences can be detected with the aid of this solution than with the original method.

It is questionable, however, whether this information in regard to cotton cellulose can be translated in terms of wood pulp without further investigation, and whether sufficient knowledge concerning the general application of the method warrants this important change of the original procedure. The method of Braidy apparently has been introduced to a considerable extent in the United States and Canada. It has been well recommended by Korte[10] and also by Griffin.[11] In particular, with the use of this solution, the bothersome stirring apparatus is done away with and a water bath employed. Before the question can be discussed as to whether it is expedient to give up the original method for this one, certain methods for the estimation of hydro- and oxycelluloses should be briefly considered. In the textile industry a large amount of work on the determination of over-bleaching by means of methylene blue has been carried out. A number of investigators, for instance, recently Ristenpart,[12] have adopted this method. Others, as Kind[13] and Kauffmann,[14] have forsaken it completely. The method rests on the fact that cotton fabric containing oxycellulose yields darker colors when dyed with methylene blue than a cotton fabric free of oxycellulose. Bleach damages to the fibers can be estimated by comparing the depth of the coloration obtained. By titration with titanous chloride, or by a colorimetric determination, the unconsumed methylene blue can be quantitatively determined. There is the major objection to this method that with different degrees of swelling of the fibers the adsorption of methylene blue will be very different. Strongly swollen celluloses adsorb the dyestuff far better than those which are not swollen. Since raw cotton shows a different degree of swelling according to its source of origin and its age, by the use of the methylene blue method, cotton samples from different sources cannot be compared at all. It may be added that with the same cotton there are differences in adsorption, depending whether a very loose or very dense fabric is used. The methylene blue method is perhaps best used as a control test in the normal bleaching process in a factory where the same cotton fabric, made from a certain raw cotton, is continually used. In the investigation of wood pulps methylene blue has apparently found little or no application.

The Cross and Bevan Alkali Boiling Test[15]

A method still employed in the United States for the estimation of damages incident to the bleaching of cotton is the boiling test of Cross and Bevan, using a 1 per cent sodium hydroxide solution for periods of 5 minutes or one hour. This test is often preferred to the copper number determination. The loss in weight which the cotton suffers during the boiling treatment is ascertained.

[9] Braidy, Rev. gén. Nat. color., 25, 35 (1921); Clibbens and Geake, J. Textile Inst., 15, 27 T (1924).
[10] Korte, Textilberichte, 6, 663-664 (1925).
[11] Griffin, Paper Trade J., 82, No. 8, Tech. section 68 (1926); Wochbl. Papierfabr., 57, 589 (1926).
[12] Ristenpart, Melliands Textilberichte, 7, 372 (1926).
[13] Kind, Melliands Textilberichte, 7, 172 (1926).
[14] Kauffmann, Melliands Textilberichte, 6, 591 (1925).
[15] Cross and Bevan, Textbook of Papermaking, London, 1907 edition, pages 92, etc.; 1920 edition, pages 101, etc.

The Kauffmann Boil Off Number

While the previously mentioned authors determine the weight of cellulose lost during the boiling treatment, Kauffmann[14] titrates the hydro- and oxycelluloses in solution with permanganate. He boils the 3 per cent sodium hydroxide solution containing the cotton, washes it, and titrates the filtrate and the wash water with permanganate. The organic substances contained in the liquors consume a definite amount of permanganate. The boiling treatment of the cotton is repeated up to five times and discontinued when the permanganate value obtained is constant. The determination of the normal consumption of cotton of the highest degree of purity is necessary, since cellulose is soluble in alkali and, therefore, very pure cotton celluloses consume potassium permanganate. If the amount of permanganate consumed by pure cotton is subtracted from the total consumption, then we have a numerical expression for the hydro- and oxycellulose which is present.

It is uncertain whether this method can be carried out more simply and rapidly than the copper number method; in the case of the Braidy procedure, wood pulps have not been tried at all. It is to be expected that the limiting value for the constant consumption of permanganate will be much larger, for in the manufacturing processes wood pulps are exposed to strong hydrolytic influences.

According to this review of the various attempts to simplify and improve the Schwalbe copper number method, the procedure as modified by Haegglund appears to be highly commendable. The Braidy modification of the Schwalbe copper number is worthy of notice.

In Using This Method

In using this method it should be remembered that the Braidy values are not comparable to the figures obtained by the Schwalbe-Haegglund procedure, because Fehling's solution is not employed in the former, but Ost's solution. With a change to such a modified method as suggested by Braidy it must be understood that the copper numbers which have accumulated for twenty years on an enormous amount of material can no longer be used for comparison purposes. To this may be added the fact that almost never is the copper number procedure given in articles relating to pulp investigations where copper numbers were determined. Naturally considerable confusion is bound to occur when copper numbers, determined by very different procedures, are compared with one another. Since the copper number is used internationally, this disadvantage must be taken into account. Only by international agreement can such serious disadvantages be removed. Such a matter can best be considered in an International Congress of Applied Chemistry. Perhaps the Congress in Stockholm offers an appropriate opportunity to do away with the confusion in the copper number determination. But beforehand it is necessary to clear up the present situation of the problem by discussion in the various technical journals. A preliminary testing or comparison of the different methods will be necessary. In such a comparative investigation, several samples of wood pulps should be tested in the largest possible number of laboratories, independent of one another. The results must be sifted and compared, and in this way the best method can be critically selected. By means of an announcement in the technical journals, technical men of the entire world can have an opportunity to express their thoughts concern-author of this paper, and to discuss the above stated procedures ing the investigation.

In order to hasten this necessary work, therefore, technical men are invited to communicate their willingness to cooperate to the technical press.

Paper Index Number Lower

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., June 1, 1927.—The April production index number for paper was 114 compared with 117 for March and 127 for April of last year taking 1919 at 100 per cent according to the Department of Commerce.

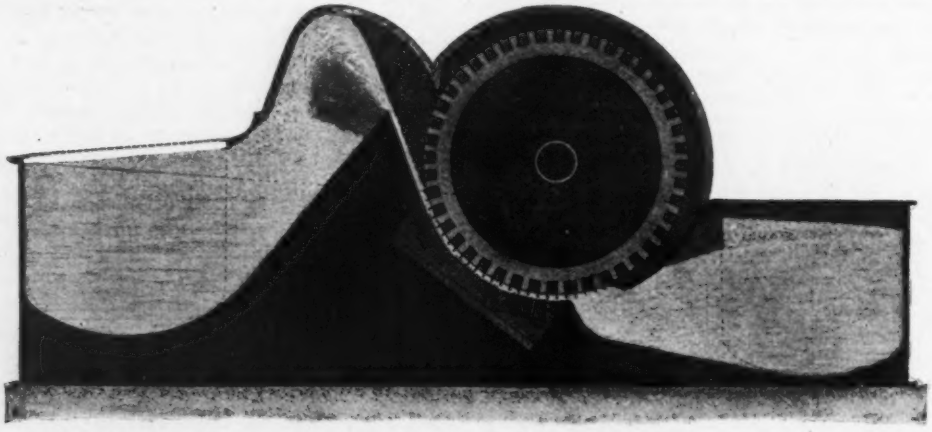
A Study of the Beater*

By S. Milne

The following is an abstract of the paper on "A Study of the Beater" given recently by Mr. S. Milne (Bertrams, Ltd.), to the members of the South Scottish Division of the Technical Section of the Paper-Makers' Association:—

The following remarks are based on the belief that the process is purely physical and can be explained by straight-forward arithmetical calculations easily understood, and it is hoped they will clear away some points reckoned as being somewhat mysterious:—

Beating in its broadest sense includes a wide range of effects from—(1) Cutting without wet beating—for example blotting paper; (2) wet beating without cutting—for example greaseproof paper; (3) the enormous range between these extremes where cutting and wet beating are blended in varying proportions to obtain the particular result desired. A very large proportion of all the paper made comes within this latter range, and it is with it I wish to deal.



BERTRAM'S PATENT BEATING ENGINE

The beaterman can vary results with an ordinary Hollander very considerably:—

(*a*) Stuff Density—He can within certain limits vary the density of the pulp. He is, however, usually limited by the inability of the beater to circulate thick stuff and most beaters fail when a certain density is exceeded. He has also usually a number of beaters supplying one paper-making machine and he has to arrange the density to suit the one with the poorest circulation, so that it is not far wrong to say that he is usually working the pulp as dense as he can and that any choice he may have is in the direction of dilution rather than in the opposite direction.

(*b*) Beating Time—He can vary the time, and time is a very important factor, but after all, in many cases, he has not much choice, as to maintain a certain output the time is fairly well fixed.

(*c*) Roll Pressure—He can also vary the pressure he applies by the roll to the bedplate, and when everything is carefully considered, it must be admitted that this is the only function left to him to vary as he likes within wide limits. It is, therefore, not far wrong to say that a beaterman, by varying the roll pressure at will and the time as circumstances permit, produces from a number of beaters—no two of which are exactly alike as to conditions of roll bars, bedplates, circulation, etc.—papers of many different kinds and qualities all up to a definite standard of excellence.

It must be admitted that this is a remarkable performance when the only instruments he has to guide him are his hand and his ear, with an eye occasionally on the stuff chests.

Cutting and Wet Beating

Separating the two distinct actions which take place during beating we have "cutting" and "wet beating." Fibers, depending on their length, may be cut into two or more pieces. The wet beating may range from nil to a maximum.

"Real" wetness is a valuable feature in any ordinary paper from many points of view, but taking it at its lowest value, namely, clay carrying capacity, it is quite conceivable that a paper made from wet beaten pulp, not cut up, containing 30 per cent of clay, would be superior to another paper containing only 20 per cent of clay, but with the fibers well cut up and not wet beaten. One paper would be flexible and the other would be brittle.

To judge to a nicety between different degrees of wetness and fineness is by no means an easy matter and as it is recognized that the microscope is the most accurate instrument we can use, it would seem that it would be a great advantage if every beaterman had a convenient microscope, so that he could study the progress of the beating in relation to the proportion of fiber cut, particularly where strength is a consideration. With a little experience he would soon learn to judge the proportion of cut fibers necessary to give the required characteristics and thus bring about a greater uniformity in the finished paper.

When maximum strength is a consideration, especially with certain fibers, the wet beating should not be carried beyond a certain point and a tester can be used with advantage to fix this point.

Comparison of Small and Large Beaters

The remark is often made that small beaters produce better stuff than large ones, and many paper-makers have a fear of large beaters in consequence. Small beaters will undoubtedly produce better stuff in a given time, but it is quite untrue to say that a small beater will do the work either better or more economically. The cause of the difference can best be explained by examples.

Wet Beating

Although the cutting power of a beater is important, the wet beating power for most papers made from short fibers is of much greater importance.

To understand fully what any beater is capable of doing, it is essential to combine or compare the cutting power with the wet beating power.

* From The Paper-Maker and British Paper Trade Journal.

Wet beating is produced by the pressure of the roll bars on the bedplate bars, combined of course with the motion of the roll bars, and is quite distinct from the cutting action. It is easy enough to say that thick bars give more wet beating than thin ones, but it has not been easy to state the difference definitely.

The wet beating function has hitherto been considered somewhat mysterious, simply because it has not been understood, and even experts have found a difficulty in explaining it clearly.

We, however, live in a scientific age and do not believe in mysteries, and we have to try to arrive at the science of wet beating and to put it into simple figures and simple language.

Wet beating is produced by the thickness of the bars and has nothing whatever to do with the edges. The edges produce the cutting action and have nothing to do with the thickness.

The wet beating power of any beater depends on the total thickness of the bars in the roll and the total thickness of the bars in the bedplate, and has nothing whatever to do with the number of cutting edges.

There is a point in connection with wet beating which is not easily grasped, and the question could quite reasonably be asked as to "what effect the slipping of the fiber has on the wet beating?" The answer is "None."

Circulation in the Beater

The circulation of pulp in a beater is of great importance and the ordinary Hollander is very deficient in this respect. Good circulation ensures good mixing and uniformity besides ensuring sufficient fibrage on the bars to prevent metal touching metal. The circulation is a good guide to the size of fibrage, but if the pulp is carried over the roll there may be ample fiberage but poor circulation. We never had any doubt as to the capability of the roll to circulate the pulp, even with bars worn well down, and we were convinced that the difficulty lay not with the roll, but with the backfall.

It is impossible in any beater to bring the power for circulation down to anything like the theoretical figure, simply because it is impossible to circulate pulp without beating it to some extent. This is easily shown as under:—

Taking 333 pounds per minute as the commencement of a charge of 7 per cent density, representing, say 4,757 pounds of pulp and water, we impart sufficient energy to lift this quantity 20 feet high, and which requires:

$$\frac{4757 \times 20}{33{,}000} = 2.88 \text{ hp. theoretically.}$$

We cannot, however, calculate on the mere lifting of the pulp, as even with the roll up a certain amount of work will be done on the pulp while it is passing over the bedplates.

The roll bars strike the pulp 12,320 blows per minute, and these with the acceleration of the pulp from, say 6 inches per minute to 2,200 feet per minute, represents power which cannot be avoided in this or in any other beater.

Beaters having the rolls elevated are subject to the same laws, as the rolls must and do impart their surface velocity to the pulp, and the power necessary to do this is absorbed wnether the rolls are allowed to lift the pulp or not. There is no possible way in which this loss of power can be avoided.

Our beater takes a total of 24 hp. at 2,200 feet per minute for circulation with the roll about 3/16 inch clear of bedplate. This power includes motor and belt. The roll alone with beater empty takes 3 hp., so that the actual power required for circulation is about 20 hp.

The work actually done in elevating the pulp is theoretically 2.88 hp., and if we allow a similar amount for power used at front, we probably will not be far wrong. This will leave about 14 hp. for work done on the pulp while passing over bedplate with roll up and about 6 hp. for circulation. It does not seem possible to reduce this with a roll 53 inches long, and it is not possible to do it for so little power with a pump or propeller.

We can, however, consider whether any other modification we could make would improve efficiency. There is one method, and one only, *viz.*, by making the bedplate wider so that a given length of roll would do more beating in a given time. The width of bedplate varies in direct proportion to the diameter of roll, so that if we double the diameter of roll we can double the beating power.

Roll Speed and Power Consumption

Seeing that the surface speed of 2,200 feet per minute is more than sufficient to ensure vigorous circulation, the question might well be asked, "What is the most economical speed to run beater rolls at?" The answer to this involves much more than mere cost of power or waste of power. Take, for instance, speeds of 1,500 and 3,000 feet per minute, equalling 25 and 50 feet per second, these velocities represent heights of, say, 10 and 40 feet, and it will be noted that the height varies, as the square of the velocity equals

$$H = \frac{V^2}{64.4}$$

Taking 333 pounds per minute, as before, the slow speed would require—

$$\frac{4712 \times 10}{33{,}000} = 1.43 \text{ hp. theoretically.}$$

and the high speed would require—

$$\frac{4712 \times 40}{33{,}000} = 5.72 \text{ hp. theoretically.}$$

These powers, it will be observed, are in the ratio of 1 to 4.

The roll speed, however, has only been doubled, and it is thus seen that to double the beating power by increased speed, we must lose considerably in power required for circulation, so that there is a distinct loss in the higher speed due to the greater amount of power required for circulation.

It is quite true, therefore, to say that the slower speed is more economical so far as power is concerned, but there is more to consider than power. The question of capital cost comes in along with floor space, etc., and each installation must be considered on its merits.

It might, for instance, be quite easily proved to be economical to run a beater at what might be termed excessive speed to get increased output in a given space, rather than make a complete reconstruction of a beater house, and no law can, therefore, be laid down which will suit every case.

So far as our beater is concerned, there is no limit to speed, except the bursting of the roll. We have run it up to and over 3,000 feet per minute.

Power Losses Due to Circulation

From the above it will be seen that it is impossible to obviate the losses incidental to circulation in any beater, but in our beater we have reduced these losess to a minimum by—

1. Having the smallest possible contact of roll with pulp at front, less than in any other beater, but sufficient to ensure ample fiberages.
2. Reducing the total arc of contact of the roll with the pulp to the width of the bedplate, plus the inlet portion, amounting to about 90 degrees in all, as compared with from 150 to 180 degrees or more in ordinary Hollander beaters.
3. Having the bedplate occupy the largest possible arc of the circumference, thus increasing the beating power in the most efficient manner possible and reducing the time required, and thereby the total power required for circulation for a charge.

An example will make the latter point clear:—

Take an ordinary Hollander beater requiring, say, 40 hp. for four hours to complete a charge, 20 hp. being required for circulation, we have:—

Circulating	$20 \times 4 =$	80
Beating	$20 \times 4 =$	80
Total		160 hp. hours

If this beater was altered and its beating power doubled, so that only two hours were required per charge, we would have:—

Circulating	20 × 2 =	40
Beating	40 × 2 =	80
Total		120 hp. hours

which shows a saving of 40 hp.-hours = 25 per cent.

It is clear, therefore, that if we can reduce the time to obtain a definite result, we save largely in power necessary for circulation, and the only way in which time can be reduced is by increasing the number of bars in the bedplate.

Fibrages

The quantity of pulp carried by each bar, representing a cross sectional area of 0.2 to 0.6 square inches, seems surprisingly small, but it is ample not only to ensure vigorous circulation, but to thoroughly cover the edges of the bars.

It is impossible to ascertain the exact shape the pulp takes when passing over the bedplate, but it seems reasonable to suppose that centrifugal force is continually urging the pulp outwards so that it forms a fiberage on every bar of the bedplate immediately in front of the roll bar. It is only by some such action that every bar can do equal duty.

The fibrages are formed on the roll bars before they touch the first bar of the bedplate, but further fibrages must be formed by centrifugal force, as it is unreasonable to imagine a roll bar to carry a fibrage across, say 60 bars in a bedplate without renewal.

Fibrage is an excellent expression, and it is quite true to say that without fibrages there can be no beating.

Roll Bars

When bars are fitted into the roll in clumps, the front bar of each clump carries most of the pulp, and the others are apt to carry too small a quantity. There can be no doubt that equally pitched bars will give better results, but it is somewhat difficult to decide the minimum pitch that would be workable for different classes of material. We have 88 bars in a roll 60 inches in diameter, which are approximately 2-inch pitch, and the results are excellent in every way. The bars only project from the roll 1 inch when new, and to prove that they could be worn well down, we filled in pieces of wood, leaving the bars projecting only three-quarters of an inch and the circulation was very little, if any, reduced on a wood pulp furnish. When the cross section for pulp required for circulation, namely 0.2 to 0.6 inch is considered, three-eighths of an inch projection is ample. It seems reasonable to suppose, however, that a greater projection would be advisable for long-fibered material like hemp or flax, but it is quite conclusively proved that a small projection is all that is necessary for short-fibered material.

Bedplate Bars

The statement has often been made that no advantage can be gained by increasing the number of bedplate bars beyond a certain limit, and this statement has been made so often that it has come to be accepted as a fact.

Before we built our beater we carefully considered this matter and concluded that as the roll bars would form fibrages on every bedplate bar by centrifugal force, we could use a much greater number of bedplates with perfect safety.

We therefore decided to make the bedplate cover an arc of 75 degrees of the circumference of the roll. We arranged the backfall at an angle of 15 degrees to ensure the pulp being thrown forward. This brought the front bar of the bedplate directly under the center of the roll, leaving ample inlet for the pulp to the roll.

The pitch of the bars in the bedplate is very important and, like the roll bars, they should not be placed too close together.

The actual beating effect can be reduced very seriously by placing the bedplate bars too close together, as the spaces between them would be easily plugged up.

Here, as with the roll, it is difficult to lay down any law, but it would seem that the dividers should be somewhat thicker than the bars for short-fibered materials and probably considerably greater for long-fibered stuffs.

Angle of Bars

Much has been written regarding the angle of the bars, and it has been stated that the angle should not exceed 43 degrees nor be less than 30 degrees.

We are inclined to a small angle, merely enough to ensure smooth action and the smaller the better.

No increase in cutting or wet beating action can be obtained by angling the bars, and it is quite a mistaken idea to assume that parallel bars do not cut. The reverse is the case.

We have an experience a good many years ago with one of our refiners. We were testing the large-angle theory and arranged the bars at a smaller angle than 43 degrees. The result was disastrous, as the machine was utterly useless until the bars were altered to a small angle. It seemed that the large angle allowed the bars to push the pulp away and no work of any kind was put on the fiber. This test was conclusive, so far as we were concerned, regarding large-angled bars.

Weight of Beater Roll

The statement has often been made that good stuff, particularly for thin tissue papers, cannot be made with heavy rolls, and for some stuffs wood rolls are advocated on account of their light weight.

No greater mistake was ever made. The real point in beating is not the weight of the roll, but the distance between the roll and the bedplate, which will vary with every condition of the pulp down to the diameter of a fiber or less. This distance, however, should be quite regular and not be subject to variation, such as by the jumping of the roll or bedplate.

The weight is not all necessary for pressure on the bedplate, but it is very necessary for inertia to ensure smooth action.

A light roll will yield to a lump which will pass through and come round again, whereas if the roll is of ample weight, the lump is dealt with at once.

The heavy roll will, so to speak, receive a heavy blow without yielding and will run in a smooth, steady manner, which requires to be seen to be really appreciated.

It is this want of weight or inertia which has been fatal to the hydraulic plates. These looked at one time to be very fine things indeed, but they have not come up to expectations, entirely owing to their small mass and want of weight.

The roll, shaft, etc, in our beater weighs about 10 tons, and is not an ounce too heavy. It runs in ordinary ring oiling bearings. We do not consider roller or ball bearings would be of any advantage, as the roll only takes 3 hp. to drive it, and any saving possible through other bearings would not cover the uncertainty involved.

Adjustment of Roll and Beating Pressure

In an ordinary Hollander beater in which the roll is adjusted by hand, the beaterman when he lowers the roll reduces the distance between the roll and bedplate bars. This distance remains constant until he alters it again.

Every time the roll is lowered the pressure on the pulp is increased, and this pressure gradually decreases until the roll is lowered again.

If the pressure applied to the pulp was recorded on a chart, it would show a number of steps corresponding with the lowering of the roll. A chart for power would also show these steps.

Data regarding the actual pressure various pulps will stand is not available meantime. It is, however, safe to say that it is much higher than generally supposed, and there is much still to learn as to the maximum thickness of bars that can be used and the pressure they will require to attain highest efficiency.

Edges of Bars

The bars in the roll and bedplates have square edges and will, therefore, maintain their cutting and wet beating factors all the time.

Beveled bars are continually changing in thickness, and the ratio between cutting and wet beating is, therefore, also varied.

For all ordinary papers, and for most special papers, bars with square edges are better in every way.

The actual thickness of the bars must be fixed to suit the average paper being made, and experience is required to fix the most suitable thickness.

Thin or sharp bars will cut the pulp very readily, but it is a mistake to think that thick bars will not cut the fibers, as if the roll is heavy enough and the pressure applied, thick bars can be made to cut just as easily as thin bars, and an important point in beater design is to so arrange the thickness of the bars that the roll can be lowered to use power to the best advantage.

Power and Beater Efficiency

Many ordinary beaters use more than 50 per cent. of the total power to circulate the pulp, and it is quite a common thing to get a beater using 37½ hp. at full load and 20 hp. with the roll up, in which case 20 hp. is required for circulation and 17½ hp. for the actual beating.

The efficiency of such a beater could be very greatly increased by making the bars thicker, so that the beater would take a total of, say, 60 hp., in which case 20 hp. would be required for circulation and 40 hp. for the actual beating, and a great saving in power would be made thereby, as the greater the difference between the full load power and the circulating power the higher the efficiency of the beater.

We have to confess that the data regarding thickness of bars which we have been able to get from existing beaters has been of little value in assisting us to fix the best thickness of the bars, and we can arrive at a conclusion very much better when we get a charge of material to put through the experimental beater. We can then arrange the wet beating factor much more accurately.

Temperature Rise a Guide

A small rise in temperature of the pulp in a beater is a very fair guide to the efficiency of the beater. The whole of the power put into the beater shows itself in increased temperature of the pulp, and if there were no radiation or loss of heat the total power could be fairly accurately calculated from the rise in temperature.

The beater which will produce a certain quality of pulp with the smallest rise in temperature will be the most economical.

When the temperature rises too high the stuff will, instead of becoming more wet, become more free, and for very fine stuffs a small rise in temperature becomes to be of very great importance.

Some of the results of our tests are as follows:—

Grade	Beating time, hr.	Temp. rise, °F.
Finest tissue papers from rags	8:00	51
Kraft paper	2:30	20
Kraft paper	2:10	17
Sulphite wrapping paper	1:40	13
Glazed imitation parchment	2:00	16
Esparto papers	3:00	23

These are for first trials, and there is little doubt that better results can be obtained with a little experience in working the beater.

Mixing and Lodgments

In many of the older books on paper-making it is repeatedly mentioned that the beaterman should keep the stirring stick going. These instruments, no doubt, were necessary long ago, but they should not be necessary today. One might ask where all the stirring sticks go to?

If the beater is properly constructed with the trough of correct shape, so that pulp cannot find any place to lodge in, the circulation should be so perfect that there should be no need of any assistance from stirring sticks.

The ordinary Hollander trough has been experimented with in many ways, chiefly in regard to the distance between the midfeather and the ends of the trough, and it has been found that the narrower this space is made the greater the trouble.

The theory of the correct shape of trough is really very simple when clearly understood.

Cellulose for Tanning Extract

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., June 6, 1927.—The possibility of converting a waste product of the paper industry into a necessary material used in the leather industry has been revealed as a result of research conducted by the Bureau of Standards, Department of Commerce.

In the manufacture of pulp for use in paper making, quantities of waste water containing organic matters are run off into streams. Research has shown that these waste liquors can be so treated as to produce a material suitable for use in making leather. The Bureau of Standards conducted an investigation and found that leather filled with materials derived from waste liquors was equally as durable as leather filled with such tanning materials as chestnut wood and quebracho wood extracts. The Bureau then investigated the suitability of sulphite cellulose extracts, (treated and concentrated waste liquors) for use in the actual tanning operations. Chemical examination of various extracts showed them to contain usable amounts of materials which would firmly combine with hide to form leather. The color imparted to leathers by the use of these materials was satisfactory. Actual tests produced leather of good strength, wearing quality, and appearance.

The results of the investigation show that sulphite cellulose extracts can be satisfactorily used for tanning when blended with other materials such as quebracho wood and chestnut wood extracts. The tanner would benefit from this discovery, according to the Bureau of Standards, by having available a cheap raw material which could be substitude in part for other and often more costly materials and make him less dependent upon imported products. The paper mill manufacturer would benefit through the utilization of a waste product the disposal of which has become a serious problem because of stream pollution.

The increased use of sulphite cellulose extracts for tanning purposes would it is said, be of national economic benefit and would contribute to the greater utilization of a product now largely wasted.

Copies of this publication Technologic Paper No. 339, may be obtained from the Superintendent of Documents, Government Printing Office, Washington, D. C., at 30 cents each.

R. E. Blackburn Goes With Inso Board Co.

[FROM OUR REGULAR CORRESPONDENT]

ST. JOSEPH, Mo., May 31, 1927.—R. E. Blackburn, who for several years has been connected with the Insulite Company, severed his connections with that company on May 15 and has accepted the position as production manager for the Stewart Inso Board Company.

The Stewart Inso Board Company is just completing a mill at St. Joseph, and will manufacture Insulating board under the trade name of Inso board, from wheat straw.

Extensive tests have been carried on for several years by Dr. Sidney D. Wells, scientist, who for many years has been connected with the Forest Products Laboratory, operated by the United States Department of Agriculture, at Madison, Wis. These tests have shown that insulating board, manufactured from wheat straw has more insulating value than other fibers. The new company is amply covered in the process by applications for patents, and shipments will start about July 1.

A large proportion of the output of the new company has been contracted for in advance, according to officials. The new mill will have a capacity of more than 100,000 square feet per day.

New Use for Parchment Paper

By C. L. Mantell, Consulting Chemical Engineer, Pratt Institute, Brooklyn

The blackening of the inside of tin cans by food products preserved in these cans has long been objectionable. Tin cans are made of tin plate. Tin plate is sheet steel covered with a thin layer of tin. The blackening of the inner parts of the tin can is not harmful. From the aesthetic viewpoint, however, every one would be happier if it were eliminated.

Occasionally, particularly in the case of sea food products, the blackening may discolor the food. In the case of canned lobsters and clams, the entire inside of the can is deeply blackened. The appearance of the food may be completely spoiled. The effects are not as bad with corn and beans, although at times, "corn black" is quite troublesome to the canner.

The discoloration is due to the formation of iron and tin sulphides on the tin can surface. Many food products, such as the legumes, sea food and meats, contain sulpho proteins. These

Effect Shown in Using Paper Liner

may break down during processing, with the resultant production of hydrogen sulphide or related substances. These may attack the metals of the can to form black or brown sulphides. The sulphide formation results in tarnishes on the metal or blackening.

The problem of eliminating "can black," with the resultant production of more appetizing food, has been solved by the use of paper liners in tin cans. This method is cheaper than lacquering or enameling the inside of the can. Lacquers are far from being satisfactory. They may cut down the decorative effect of the tin metal coating on the can. The decorative effect of the tin makes a better looking package.

The effect of the use of paper liners in canned food products which severely discolor is shown in the illustration. Can No. 1 contained clams which were packed in the regular manner. The inside of the can and the clams were both blackened. They were not at all as appetizing as those packed in can No. 2 where a paper liner was used. The inside of the can was still bright and clean, the clams were not blackened. They have a much better appearance than ordinarily, and are much more stimulating to the palate.

The paper used is a special parchment containing a very small amount of zinc salts. The paper is cut into circles to fit the bottom and top of the cans. The sides are protected by a sheet of paper rolled into a loose cylinder. The liner fits loosely into the can, no attempt being made to hold the cylinder together.

That paper liners are effective, there is no doubt. They cost little and eliminate the necessity of using glass containers for the appearance of the foods. This avoidance of glass allows the use of the inexpensive tin can. The obvious advantages of the tin can over glass when shipment of goods is considered, is well appreciated. The paper liner has been a boon to the packer of sea foods and similar products. Practically complete adoption followed the successful large scale experiments. Paper liners have been a great help to the Canadian lobster packers, especially.

The food product canner has become a new customer, through cooperative research, of the parchment paper manufacturer.

Washing, Riffling, Screening and Dewatering Sulphite

Special Inquiry No. 75

A member wants detailed practical information regarding the blowpits, rifflers and screens in a sulphite mill as follows:

1. What blowpit area in square feet should be reserved per ton of sulphite pulp?
2. What riffler area should be reserved in square feet per ton of sulphite pulp?
3. What kind of riffler is best (sketches) and how should it be used?
4. How much water in gallons per ton of pulp is necessary for washing sulphite pulp in the blowpits?
5. How many screen plates in flat screens should be reserved per ton of pulp, and when stating the number of screen plates give the cut of the plates.
6. What is the best consistency of stock as the sulphite is fed to flat screens?
7. What is the best consistency of stock to get full production on a Rogers or other type of wet machine?

Responses should be sent in at once so that the special report containing them can be prepared early in July.

A copy of the replies, in blank, will be sent to all who contribute to the discussion.

Send responses to

W. G. Mac Naughton, *Sec.*,
18 East 41st street, New York.

Unslacked Lime v. Hydrate for Manufacture of Bleach

Special Inquiry No. 76

1. What is the delivered price at the mill? (If available please give both.)
2. What method is used for preparing milk of lime?
3. With unslacked lime is any trouble experienced from air slaking? Please answer fully.
4. What are the sludge losses?
5. Please state any additional information, from your experience, which might be of value in comparing the two.

Under the Service to Members Plan a transcript of the responses, in blank, will be distributed to those who contribute the information called for in the inquiry.

W. G. MacNaughton, *Sec.*,
18 East 41st St., New York.

West Virginia to Build at Covington

The West Virginia Pulp and Paper Company, 200 Fifth avenue, New York City, has placed a contract with the Morton C. Tuttle Company, 862 Park Square Building, Boston, Mass., for the erection of a concrete, brick and steel storage building and railroad trestle, approximately 70 x 240 feet, at its Covington plant. Work will start immediately.

Current Paper Trade Literature

Abstracts of Articles and Notes of Papermaking Inventions Compiled by the Committee on Abstracts of Literature of the Technical Association of the Paper Making Industry

Clarence J. West, Chairman

Safety Paper. B. W. Smith assignor to Todd Co., Inc. U. S. pat. 1,588,201, June 8, 1926. A pattern simulating the natural appearance of the paper itself is marked with sensitive ink which is conspicuously deepened in color by attempted use of chemical ink eradicators. This sensitive ink may comprise manganese ferrocyanide, toluidine hydrochloride, benzidine sulphate or similar reagents.—A.P.-C.

Process of Making Construction Material. R. P. Perry and F. W. Adams assignors to Barrett Co. U. S. Patent. 1,577,074, March 16, 1926. A sheet of freshly formed and impregnated roofing felt is wound on a roll to a thickness of several plies, and a layer of asbestos and waterproofing material is then applied.—A.P.-C.

Safety Papers. W. J. Murray assignor to Todd Co., Inc. U. S. pat. 1,589,210, June 15, 1926.—Paper is impregnated with a dihydro-paratoluidine, or other primary amine, a developer such as beta naphthol and a nitrate, arranged in a predetermined design.—A.P.-C.

Paper for Wrapping Meat. C. C. Campbell. U. S. pat. 1,589,106, June 15, 1926. Paper is treated on one side with pyroligneous acid and on the other side with paraffin.—A.P.-C.

Leather Substitutes and Process of Making. R. A. Marr assignor to Ramar Syndicate, Inc., Can. pat. 260,727, May 11, 1926.—Wood (preferably hard wood or bamboo (or similar material), or a mixture of both is digested with a 1 to 4 per cent solution of neutral sulphates (preferably a mixture of 2 parts of zinc sulphate, 1 part of potassium sulphate and 2 parts of sodium sulphate) for 75 to 100 minutes at 90 to 100 pounds per square inch. The cooked material is soaked over night in water, crushed in an edge runner, run through a pulper and beaten and washed so as to remove from 45 to 90 per cent of the disintegrated intercellular cementitious material (equivalent to 5 to 10 per cent of the dry substance of the wood.) The beating is carried out at a speed of not less than 1,000 feet per minute. The stock is sized with rosin, with or without rubber latex, precipitated witth alum, and run on a paper machine, with or without a backing sheet of textile fabric.—A.P.-C.

Machine for Applying Heads to the Ends of Rolls. F. H. Anson. U. S. pat. 1,580, 361, April 13, 1926.—The machine consists essentially of a platform or bed for the accommodation of the paper roll and brackets at either end of the roll for carrying the paper heads to be applied to the latter, these brackets being movable to press the roll between them and apply the heads, and subsequently release the roll to permit its removal with the heads applied on. The machine is of such size as to be able to handle any length of roll usually encountered, and the brackets are automatically released and withdrawn when the pressure reaches a given predetermined value. In order to prevent damage to the roll if it is pushed longitudinally under the pressure of the movable brackets, the bed is constructed of rollers which are individually rotable.—A.P.-C.

The Influence of a Shortened Preliminary Cooking Time on the Nature of Sulphite Pulp. O. Routala and J. Sevon. Zellstoff u. Papier 6, 257-259 (June, 1926). Results of cooking experiments when the temperature and pressure are brought to 100 degrees C. and 4 atmospheres, respectively, within the first hour of the digestion process show that this shortening of the first stage of the cook is without influence on the sulphite pulp.

Utilization of Waste Sulphite Liquor. Akt. fuer Zellstoff und Papierfabrikation, and M. Steinschneider. Ger. pat. 427,540. Papierfabr. 24, 394 (June 20, 1926). In the preparation of sulphur compounds from waste sulphite liquor, the latter is heated at high temperature in an atmosphere of hydrogen, with or without pressure. An improvement over Ger. pat. 412,697.—J. L. P.

Process for the Manufacture of Alcohol from Waste Sulphite Liquor. E. S. Sandberg and H. A. E. Nilsson. Ger. pat. 430,076. Papierfabr. 24, 510 (Aug. 15, 1926). Fermented waste sulphite liquor is evaporated to a definite concentration in the manufacture of an organic substance. The alcoholic condensate is distilled in a suitable apparatus.—J. L. P.

Disinfectant from Sulphite Waste Liquor. E. Schlumberger. U. S. pat. 1,585,792, May 25, 1926. Sulphite waste liquor is treated with chlorine and the precipitate formed is separated. It is a disinfectant and may be improved by treatment with hydrochloric acid and potassium chlorate.—A. P.-C.

Disintegration of Bast Fibers. G. Frank. Ger. pat. 431,862. Papierfabr. 24,511 (Aug. 15, 1926). Bast fibers are disintegrated by treating them before bleaching with a concentrated, cold magnesium chloride solution. J.L.P.

Process for the Manufacture of Pure Cellulose Fibers from Cellulosic Materials Containing Incrustations. H. Silbermann. Ger. pat. 432,052. Papierfabr. 24, 524 (Aug. 22, 1926). Fibrous raw materials are given alternating treatments with an alkaline solution containing a salt of a weak acid under a pressure of at least 1 atmosphere, and with chlorine gas at 15 to 20 degrees C. containing a certain amount of water vapor. J.L.P.

Washing and Bleaching Apparatus. W. J. Herrbold. U. S. pat. 1,586,951, June 1, 1926. A tank (preferably Z-shaped), is divided into a suitable number of compartments, each containing a rotary washing drum. Associated with each drum is a small mixing chamber into which the thickened stock is discharged and where it is mixed with water and agitated, and from which it is sent into the next compartment where it is again dewatered. Each compartment has a valved discharge pipe, so that the stock can be withdrawn from any desired part of the apparatus, according to time required for washing. The stock may be mixed with bleach solution in one or more of the mixing chambers, if desired.—A.P.-C.

The Possibilities of Diminution of Stock Losses and Waste During Paper Machine Operation. M. Gottloeber. Papierfabr. 24, 366-373 (June 13, 1926).—A detailed study of the reasons for the losses on the paper machine, and suggestions for the diminution of the same. Special attention is paid to the distribution of water removal on the machine.—J.L.P.

Experimental Results with Sand Traps in the Pulp Industry. S. Voigt. Wochbl. Papierfabr. 57, 564 (May 15, 1926).—A reply to an article on the same subject in Wochbl. Papierfabr. 57, page 357 (1926).—J.L.P.

The Sand Trap. E. Belani. Wochbl. Papierfabr. 57, Sondernummer 79-81 (June 12, 1926).—A theoretical study relating to the proper design of sand rifflers.—J.L.P.

A Consideration of the Fiber Deposition on the Paper Machine Wire. W. Schmid. Papierfabr. 24, 282-284 (May 9, 1926).—A general discussion of fiber deposition on the paper machine wire.—J.L.P.

Practical Devices for the Mechanical Transference of the Paper Web to the Couch Roll. O. Christian. Wochbl. Papierfabr. 57, 792-796 (July 17, 1926).—Patented devices are described for transferring the sheet to the couch roll by water or air sprays.—J.L.P.

Filtering Devices for Waste Water. E. Liebehen. Papierfabr.

24, 414-415 (July 4, 1926).—A new fiber save-all for machine white water is described.—J.L.P.

Hints on Suction Roll Operation. E. Krause, and others. Zellstoff U. Papier, 6, 255-256 (June); 348-351 (Aug. 1926).—Three short articles on suction roll operation.—J.L.P.

Rolls. A. Hauser. Wochbl. Papierfabr. 57, Sondernummer 75-77 (June 12, 1926).—Several rolls for paper machine winders and rewinders are described.—J.L.P.

The Proper Performance of Rubber Rolls on the Paper Machine. G. Becker. Wochbl. Papierfabr. 57, 969-970 (Aug. 28, 1926).—The desirable properties of rubber rolls for paper machines are discussed.—J.L.P.

New Experiences with Rubber Roll Coverings. G. Becker. Papierfabr. 24, 331 (May 30, 1926).—Descriptive of rubber roll coverings of superior elasticity and toughness recently manufactured by the Becker Rubber Works, Heidenheim, Germany.—J.L.P.

The Treatment of Felt Covered Rolls. J. Berlinger, Papierfabr. 24, 293 (May 16, 1926).—To increase the life of a felt covered roll, it is bound and scalded on the sides and then shrunk in cold water. The roll is placed in the machine, revolved for a few minutes without the water spray, treated with two pails of clay, two of size, and then a pail of alum. Water is added only after the paper web has passed the couch.—J.L.P.

Impression Roll with a Metal Jacket for the Manufacture of a Differently Tinted Watermark in Paper. Reichsdruckeri. Ger. pat. 427,016. Wochbl. Papierfabr. 57, 542 (May 8, 1926).—A blended half-tone is produced in the paper by means of an impression roll suitably covered by a metal jacket.—J.L.P.

Progress in Dandy Roll Construction. E. Belani. Papierfabr. 24, 325-327 (May 30, 1926).—Recent developments in German, French and English dandy roll construction are briefly enumerated.—J.L.P.

Process and Device for Moistening Paper. Koenigsberger Zellstoffabriken and Chemische Werke Koholyt. Ger. pat. 429,-017. Papierfabr. 24, 378 (June 13); Wochbl. Papierfabr. 57, 867 (July 31); Zellstoff U. Papier 6, 274 (June, 1926).—Sheets of paper are passed through a cold machine arranged to condense moisture on both sides of the web.—J.L.P.

The Moistening of Paper. H. Postl. Wochbl. Papierfabr. 57, 893-895 (Aug. 7, 1926).—Machinery, involving the use of rotating brushes, for moistening paper is described.—J.L.P.

Machine for the Manufacture of Hollow Paper Articles. P. E. Winnertz. Ger. pat. 430-757 Papierfabr. 24, 511 (Aug. 15, 1926).—Description of a machine.—J.L.P.

Stuff Preparation (Beater Control)

By George K. Spence

In accepting the chairmanship of the new committee originated at a recent meeting of the executive committee to study problems relative to stuff preparation or beater control, I am doing so because of the fact that I have for several years been interested in the formation of such a committee. This committee can, if properly functioning, do an enormous amount of important work, which will be of great benefit to all paper manufacturers. The scope of the work is very broad and will eventually require a very large committee to handle it properly. In order to outline this work to the best advantage, I am selecting a limited number of colleagues on the committee for the first year, all of them being men with considerable experience and well qualified to assist in planning the future work to be carried on. It will no doubt be necessary to sub-divide the work of the committee with subchairmen to handle the various branches, but this can be better determined when our present committee meets and reviews problems involved.

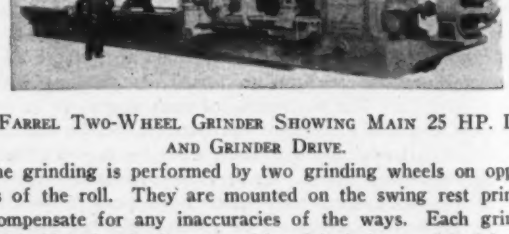
The work of this committee will cover control of furnish of sulphite, soda, rag and groundwood pulps, as well as deinked papers, together with methods in use for deinking old papers and preparing the stock for the beaters, the control to include alkalinity, chlorides, colloidal stock, etc.; time element in beating; effect of beater temperature on stock for various purposes; effect of density on time of hydration; hydrogen-ion control; quick methods for determining nature of stock before passing from the beaters, including consistency and freeness testers, hand sheets, etc.; effect of jordans as compared with beaters; mechanical devices for recording the action of beaters; coloring, sizing, and loading, together with methods for controlling amount used; benefits derived from the use of silicate of soda, starchy materials, animal size, etc.; foam and slime preventatives and many other problems relative to control of stock prepared in the beaters for the paper machines.

The members who have been asked to serve on this committee are: G. N. Collins, Dill & Collins Company, Philadelphia, Pa.; C. Nelson Gain, Interlake Tissue Company, Merritton, Ontario; E. P. Gleason, Nekoosa-Edwards Paper Company, Port Edwards, Wis.; A. W. Nickerson, Process Engineers, Inc., 501 Fifth avenue, N. Y. C.; R. W. Pattison, American Writing Paper Company, Holyoke, Mass.; J. E. Plumstead, Jessup & Moore Paper Company, Wilmington, Del.; J. J. O'Connor, Mead Pulp & Paper Company, Chillicothe, O.

Two-Wheel Roll Grinder Has New Crowning Device

The Farrell Foundry and Machine Company, of Ansonia, Conn., has designed a new 36 inch two-wheel grinder for quick accurate grinding of rolls not over 36 inches in diameter, that has a new crowning device by means of which a perfect crown is obtained without using any cut and try method. This device in addition to being accurate can be set in a few moments.

The carriage is run to the center of the roll, two nuts are loosened and the scale turned to the desired crown. The nuts are then tightened, a clutch thrown in and the crowning operation is started. The action of the crowning device is perfected by means of a cam acting through lifting rods. The back of the wheel head is raised and lowered and the grinding head pivoted in front of the wheel head. Thus the wheels are moved to and from the center of the roll and produce a perfect crown. Concaving is also accomplished accurately and quickly with this device. If straight grinding is desired the entire device may be disengaged by merely throwing a clutch.



36" Farrel Two-Wheel Grinder Showing Main 25 HP. Drive and Grinder Drive.

The grinding is performed by two grinding wheels on opposite sides of the roll. They are mounted on the swing rest principle to compensate for any inaccuracies of the ways. Each grinding wheel is 20 inches in diameter with a 2 inch face and is driven by a 7½ hp. Westinghouse motor. This provides for quick and economic production for the wheels can be driven to their maximum capacity. This grinder is particularly good for 228 inch calender stacks in paper mills. The entire machine including the driving head, the bed, the ways, and the neck rests is rigidly and sturdily constructed, and all parts are adequately protected. The driving head which is direct-connected to a Westinghouse 25 hp. motor is completely enclosed and provided with flood lubrication. Automatic lubrication is also provided for the ways and the feed screw as well as for the head.

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Professional Co-operation Between Accountants and Attorneys*

By Harold Dudley Greeley, C.P.A., Attorney at Law, New York City

Dr. A. N. Brubacher, President of the State College of Teachers in Albany, N. Y., in a recent article in the *Atlantic Monthly*, said that a profession presupposes a body of scientific and technical knowledge, which can be acquired only by extended study and careful practice by persons who have the necessary native endowment, and that the practitioners of a profession incur definite moral obligations to one another and to the community. Admitting that, it seems a pity that either the professional lawyer or the professional accountant should make no effort to understand the other's work and more of a pity that either should make sport of the other.

In the *Journal of Accountancy* for June, 1926 (Vol. LVI, p. 449), the editor makes a caustic comment on "the complex bedevilments of legalism." The law is not alone in having bedevilments. Whenever it becomes necessary for an accountant to explain to a lawyer the precise difference between funds and reserves, the lawyer immediately complains of the bedevilments of accountancy. Did you ever get a doctor to explain what was the matter with you and have him talk about metabolism? In theology, the same word had to do with the change of the bread and wine in the eucharist; in poetry, it signifies a change from one meter to another. Because we may not understand the meaning of the word, are we to complain about the bedevilments of medicine, of theology and of poetry?

In dealing with law one must not forget that it is a very ancient institution. Its imperfections today are usually due to its failure to keep abreast of our rapidly changing economic life. Carlyle said that "all law is but a tamed furrow field, slowly worked out and rendered arable from the waste jungle." Johnson said, "The law is the last result of human wisdom acting upon human experience for the benefit of the public." It should be the mirror of our everchanging life. As might be expected, a certain amount of priestcraft has grown up among the law's practitioners until the average layman looks upon the legal profession as the bar mysterious if not the bar sinister. Prof. Jowett once said, "logic is neither a science nor an art, but a dodge." Unfortunately, that is the attitude of many towards the law."

Today there is a modern tendency to let the layman in on the secrets of the profession and its terminology, to provide him with utilitarian books on what to do before the lawyer comes; he is told enough to give him a generally intelligent understanding of what the whole business is about. In 1925 Macmillan published a book on "The Theory of Justice" by Rudolf Stammler, professor of law in the University of Berlin, translated by Isaac Husik, professor of philosophy in the University of Pennsylvania. He thinks that law should be governed by philosophy, through which he proceeds from law to justice. This follows Socrates who said, "Until either philosophers become kings or kings philosophers, states will never succeed in remedying their shortcomings." But that is not the theory of our law. We believe that there is a sharp dividing line between practical law and the social ideal of justice. The latter embraces the origin and underlying principles of law, but our system of law covers the actual, positive and concrete applications of law to situations or facts with which we come into contact day by day. We rely largely upon precedent, and to discover the rule of law which ought to apply to a present situation requires keen analysis and particularly accurate definition; this is about the most difficult thing in the world to do.

Laymen frequently complain that the law is a slave to precedent. That is less true today than ever before. The common law as a system is eternal and unrepealable, but its units, continuity, and vitality are due not so much to precedents, the force of which changes with the passage of time and the alteration of conditions, as to a traditional art of employing legal material, a technique of guiding judicial action with reference to experience. The unique characteristic of our law, as pointed out by Dean Pound of the Harvard Law School, is that we find grounds for each decision in the recorded decisions of the past and develop the principles of our decisions out of concrete experience with concrete cases. That is what sends the American and the English lawyer persistently and consistently to the reports of former cases in his pursuit of the science of jurisprudence.

But when no precedent can be found, the courts apply the general principles of law. In Peabody v. Travelers Ins. Co., 240 N. Y. 511, 148 N. E. 661, the court said that absence of precedent was no bar to recovery if there had been a wrong which the court could recognize. When all precedents are opposed to what seems just, under changed economic conditions, sometimes the courts will overrule their former decisions but sometimes the doctrine of *stare decisis* is too strong and the matter is left to the legislature to remedy. The law of unfair competition is an example of plastic law changes by the courts; what is now regarded as an actionable wrong was unobjectionable twenty-five years ago. An instance of leaving it to the legislature is that of the Workmen's Compensation Law in New York. At first it was

* N. A. C. A. Bulletin.

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declared unconstitutional and thereupon the legislature submitted to the people and secured from them a constitutional amendment under which a later Act was approved by the Courts. In all of these matters, judges usually act as intelligent men of the world. Judge Wagner, now Senator-elect from New York, said in May, 1925, "We, as courts, are not bound to close our eyes to what as men, we know."

With our system of law as it is, how can accountants best co-operate professionally with lawyers? Co-operation, it may be said, is not at all confined to accountants in public practice. It is needed fully as much from the accountant in private employ, whatever his title or function in financial or cost accounting may be. The professional work of the lawyer may be divided roughly into litigated and non-litigated departments. Let us consider what the accountant can and should do in connection with each field of activity.

Facts More Important Than Law

In the first place, it is not generally realized that, in litigation, facts play a more important part than law. So much of our law has become definite that many cases are settled out of court on the advice of lawyers. The work of the American Arbitration Association and of the other bodies throughout the country which are urging arbitration, rests in the last analysis upon the belief that once the facts are known, practical justice becomes fairly easy of attainment, and upon the further belief that elusive facts can be brought to light more surely by the informal procedure in arbitrations than by the application of formal rules of evidence. Rules of evidence were designed and are applied only as an aid to juries. When cases are not tried before juries, these rules of evidence are very loosely enforced, and thus much time is saved. In New York the Supreme Court, which is a court of original jurisdiction, has a non-jury Part to which judges endeavor to send cases by trying to induce the parties to waive a jury trial. A very large part of the time involved in litigation is spent in fighting to get favorable facts into evidence and to keep unfavorable facts out of evidence. These minor tactics of trial lawyers consume so much time that our calendars in New York have become intolerably congested and the best thought of the leaders of the Bar is being given to finding a remedy. In our Supreme Court, a case must wait for trial for from two to three years. A special call of the calendar of that court has just been completed, on which the attorneys in every one of the thousands of cases awaiting trial were required to appear in court and were asked to explain why it was not possible to settle their cases without trial. In New York and Bronx counties, 37,048 cases were called and 7,632 were settled without trial; in 2,226 others the defendant's lawyer failed to appear; and 1,309 were dismissed because plaintiff's lawyer did not appear. (Vol. 76, N. Y. Law Journal, page 2125, 2/10/27.) As a result of all of the efforts to avoid litigation, it has been estimated by John Dashiell Myers of the Philadelphia Bar that the litigation of today is about 1/100,000th of the amount of litigation 125 years ago, taking into account the volume of business done then and now. (West Pub. Co. "Docket," March, 1926.)

Avoiding of Litigation

The accountant can play a very helpful part in the avoiding of litigation. In many cases he knows the facts in a more thoroughgoing way than any other person and he should use every diplomatic means, short of losing his job or his client, to get all the facts, favorable and adverse, into the minds of the party he is serving and of that party's lawyer. In the case of the party himself, this is not always easy, because of the party's feeling of injury and his tendency to ignore unfavorable facts. In dealing with the lawyer, the accountant has difficulty because of the lawyer's unwillingness to understand the accountant's terminology, and the lawyer's risk, therefrom, of jumping to conclusions which the evidence will not sustain. Further, the accountant must always guard against any suspicion that he is not whole-heartedly loyal to his employer or client in the latter's fight for what he thinks are his rights.

In a close case, the accountant's influence sometimes is all that is needed to throw the matter into arbitration instead of into litigation. This is more likely to be true if the accountant already has become familiar with the practical working of arbitration and perhaps himself served as arbitrator in a case or two. In most commercial matters arbitration is more satisfactory than litigation. You may recall the anecdote of the boys and the walnut. One claimed it because he saw it first and the other claimed it because he was the first to pick it up. Then came a bigger boy who settled the matter by giving one half of the shell to each claimant and keeping the kernel for his fee. "Those who love the law too well, the kernel lose and win the shell."

There is a pitfall about arbitration of which you should be warned. Arbitration is worse than useless unless it is final and conclusive. If the losing party can thereafter take the case into court, nothing has been accomplished except to disclose to your opponent all of the weakness of your position. A recent case illustrates this danger. A had a morally good claim against B but one which A could not establish in litigation because of the rules of evidence. A's lawyer suggested to B's lawyer that the matter be arbitrated but he failed to tie up B's lawyer with an irrevocable consent to an arbitration which would be final. As soon as B's lawyer discovered that A's claim could not be established in any court, he promptly repudiated his agreement to arbitrate and A lost all chance of recovery through the proof in arbitration of the moral soundness of his claim. Accountants should be especially careful not to disclose any facts bearing on a disputed claim until they are assured that the necessary steps have been taken to bind the opposing party to the result of an arbitration.

May Be Called in Two Capacities

As a witness in court, the accountant may be called upon in either of two capacities: as a witness to certain facts, or as an expert. In either situation, he should remember that the old adage that whom the gods would destroy they first make mad, applies with particular force to witnesses. No matter how insulting the opposing lawyer may be, openly or by insinuation, let the witness steadily maintain an attitude of sweetness and light. Incidentally, no known method is more likely to get the lawyer mad and if a witness can succeed in doing this, *he* has the advantage. A witness once was discredited by a very simple expedient which needlessly infuriated him. He had testified to the dimensions of a piece of board which he had seen for only a minute or two about a year before the trial. He was then asked to give the dimensions of a dollar bill and he missed them by a couple of inches each way.

Before a witness may testify as an expert and give his opinion on certain facts which are stated to him in the form of a hypothetical question, he must be shown to have the necessary qualifications, to be or to appear to be really an expert. Before an accountant takes the stand as an expert, he should discuss his qualifications with the lawyer who is to call him as a witness, in order that they may be brought out by modest answers to leading questions asked by the lawyer. Nothing is more embarrassing to a witness than to have his lawyer say to him, "Now tell the Court and the jury who you are and just what you have accomplished so they will know that you are a real expert." A certain engineer once was called as an expert witness and in answer to a hectoring cross-examination as to his qualifications, he admitted that he was the best engineer in the state of New York. After he had left the stand, he explained that he could not have said anything else because he was under oath.

That man had failed to distinguish between fact and opinion, a distinction which the accountant as a witness will have difficulty in observing when he testifies to certain balance sheet items. About the most valuable thing which an accountant can do in connection with testifying is to prepare with the utmost thorough-

ness. This means not only having all his papers, detailed schedules, and analyses so sorted and labelled that he can instantly find the one he wants, but also, and even more important, it means thinking through the testimony which he is going to give and considering all of the effects which it may produce. Quantity of testimony and number of witnesses are not very important. It is the quality of the testimony which registers. Witnesses are weighed, not counted.

Introduction of Books

The introduction of books of account in evidence is an intricate procedure; before they can be admitted, certain technical preliminary proof must be offered to vouch for their reliability. An accountant assisting in the preparation of a case for trial should ascertain whether or not he can identify all handwriting in the books which is not his own, and then make certain that the lawyer who is to try the case understands exactly which handwriting, if any, he cannot identify. Failure to check up with the lawyer in advance of the trial may result in inability at the trial to get portions of the books into evidence. Some years ago a party was unable to prove certain transactions with his bank although he had in court a clerk from that bank with a transcript of his account sworn to by the cashier of the bank. There was no doubt in the mind of any one as to the correctness of the transcript but the opposing attorney blocked its introduction. This difficulty of proof is so frequently irritating that Judge Lehman of the N. Y. Court of Appeals commented on it in the *Columbia Law Review* for May, 1926, (Vol. 26, page 518). He said that he had tried cases in which three full days were required to get books and records into evidence when no one doubted their authenticity and reliability. This was caused by the opposing lawyer who hoped that the court might mistake in applying the rules of evidence on which he could base an appeal if the decision was adverse to him. Judge Lehman said that he finally hit upon the expedient of urging the lawyers to have an examination by an accountant outside of court and that he always was successful in this, unless one of the attorneys had some reason for demanding the production of a particular witness whose testimony would be required to authenticate the books. An accountant who is assisting in the preparation of a case for trial should urge that such an examination be made. He will still have a chance to testify, but in the more interesting way as an expert as to what the figures signify. He can avoid the tedious grind of authenticating the books through identification of handwriting and detailed description of the various procedures which constitute the regular course of business in which the entries were made.

Can Cooperate in a Larger Way

The accountant can co-operate also in a larger way. The law of evidence is still based to a considerable extent upon primitive business conditions when few clerks and bookkeepers were employed and single entry prevailed. It should be modified in view of the modern facts that many clerks and bookkeepers are employed, thus furnishing internal checks, and that double entry of itself guarantees comparative reliability. This advance is certain to come some day for the law grows out of social conditions. "Time will not stay its progress for the law any more than the ocean's tides would stay their ebb and flow for the mighty English king." (23 Col. Law Rev. 701, Dec., 1923.) Accountants can accelerate this advance if they will inform themselves on the rules of evidence concerning the proof of book entries and then write, and speak publicly, and argue privately with lawyers and judges whom they know, pointing out that many of these rules are obsolete and today merely hinder the cause of justice.

The acceleration is possible of attainment because of the very large part played in the law by the facts of the world as well as by those of particular cases. To realize the importance of facts, consider the role of obiter dicta. Under it, no statements by a court are binding as law unless they grow out of the facts actually proved in the case at issue. Over a hundred years ago, Chief Justice Marshall of the Supreme Court said in Cohens v. Virginia, 6 Wheaton 264,399, "It is a maxim not to be disregarded that general expressions in every opinion are to be taken in connection with the case in which those expressions are used. If they go beyond the case, they may be respected but ought not to control the judgment in a subsequent suit when the very point is presented for decision. The reason of this maxim is obvious. The question actually before the court is investigated with care and considered in its full extent. Other principles which may serve to illustrate it are considered in their relation to the case decided but their possible bearing on all other cases is seldom completely investigated." Less than two years ago the same court in Maple Flooring Manufacturers Assn. v. U. S. 268 U. S. 563, reiterated that each case must be determined upon the particular facts disclosed by the record; and opinions of the court must be real and applied in the light of those facts with clear recognition of essential differences in that regard.

The larger opportunity for co-operation by accountants lies outside the field of litigation and in his current contacts with his client's or employer's legal department or his attorneys. We may consider certain subjects on which the accountant should give specific advice and his methods of giving it together with a word or two concerning his preparation for advice giving, and a suggestion of a few things which perhaps he should not attempt to do.

Income Tax Methods

We may at once eliminate by merest reference, the accountant's obvious co-operation in income tax measures. In fact he usually eliminates the law so far as the preparation of returns is concerned, and he often carries on appeals through the Treasury Department and now through the Board of Tax Appeals. In some instances the lawyer is not called upon at all until the matter reaches a court. When the accountant does co-operate with a lawyer, the accountant should freely express himself and demand that he be heard upon such phases as inter-company profits and losses, amortization of plant and equipment, inclusion in cost of provisions for contingent reserve depreciation, and obsolescence. The New York Chapter of the National Association of Cost Accountants last year discussed how far, if at all, the accountant should go in modifying his accounting practices to facilitate the preparation of tax returns. Finally, we have the outstanding contribution of Robert H. Montgomery in his Income Tax Procedure. Prof. Beale of the Harvard Law School (40 Harvard Law Review 667, February, 1927,) has this to say about the 1927 edition: "A book on the income tax by an accountant is even more useful to a lawyer, and much more valuable to a law student, than such a book by a lawyer. Lawyers and law students are used to getting up the law for themselves; but they are helpless in the face of accounting problems. In such time of trouble this work is a present help indeed."

On January 29, 1927, there was reported a decision in a law suit which need not have been brought at all if co-operation by an intelligent accountant had been secured. (Shewan v. Moore, Vol. 76, N. Y. Law Journal, page 1935.) A contract provided: "The income tax of the corporation for the fiscal year commencing April 1, 1917, will be apportioned and the trustees will pay to the parties of the second part the pro rata amount of said income tax for the period from April 1, 1917, to February 8, 1918." The only question litigated was whether or not the words "income tax" should be understood to include the excess profits tax. The court held that the words did include the excess profits tax, for that was a tax on income, although computed in a special way. The amount involved was over $32,000, with interest for over eight years, and the attorney's fees doubtless were substantial. It is hardly conceivable that an intelligent accountant, accustomed to income tax work as he necessarily would be, would have failed to suggest that the words "income tax" in the contract be enlarged or modified so as to make definite and certain either the

inclusion or the exclusion of the excess profits tax, one type of which was in force when the contract was made in 1917. This is an instance in which a draft of the contract should have been passed upon by an accountant before the contract was executed.

Sinking Fund Bonds

Another situation in which the opinion of an accountant should be secured arises when sinking funds bonds and the supporting mortgage are being drawn. It is not uncommon to find there a requirement that a sinking fund shall be provided "out of profits." Does this mean that in addition to setting aside the sinking fund, a reserve of equal amount must be created? Here is a fruitful field for litigation when, for example, income bond holders or stockholders are deprived of current earnings for the benefit of future income bond holders or stockholders who happen to be such when a sinking fund reserve is thrown back into surplus and made available for melon cutting upon the liquidation of the bonded indebtedness. The phrase "out of profits" may or may not require the reserve (one guess is almost as good as the other), but all ambiguity could easily be avoided if an accountant were allowed to explain to the learned counsel who was drawing the bond and mortgage, the difference between cash on hand and profits earned. Lawyers consult doctors in matters of medical practice; why not consult accountants in matters of accounting practice?

Where the Word "Profits" Is Used

In the drawing of any contract where the word "profits" is used, the accountant should be consulted to make certain whether the parties really mean profits or whether they have some vague notion of an excess of cash receipts over payments. This is especially true where the contract provides that profits shall not be considered earned until reduced to cash. This is true also when a fair interpretation of the contract requires an exact definition of "capital" or an understanding of the real nature and effect of various reserves.

Recently, certain department heads in a wholesale drygoods house had contracts entitling them to share in the earnings of their departments. The contracts were drawn in a way so loose and vague that it was absolutely impossible to determine what the parties meant by the earnings of a department. This was due chiefly to the fact that the parties themselves did not know. There was a chance for an accountant to render very effective co-operation in the drawing of the contracts. The same ambiguity arises in most contracts giving an officer or an employee a share in the profits of the business. Does "profits" mean gross or net? Does it mean before or after income taxation? Should interest on capital, invested or borrowed, be treated as an expense in determining the profits? Are extraordinary charges and credits to be excepted? In a contract with an operating manager, is income from investments to be included, and should amortization of discounts on outstanding bonds be taken into account? When commissions on sales are allowed, do the parties mean gross sales, and if not, just what items are to be deducted in determining the net sales? Any intelligent accountant by discussion with the parties and their attorneys could lead them to some definite decision with the elimination of practically all ambiguity.

The law is now developing a twist which makes it advisable for some one to caution corporation officers concerning resolutions by the Board of Directors declaring dividends. Some courts hold that the closing of the corporation's stock books affects the real ownership of the dividend when the stockholder of record on the date of declaration is not the stockholder at the date of closing. If the Board wants to take a stand on this question, its resolution should make this clear, especially where dividends are to be paid over a period of months, to stockholders of record at the close of business on the last day of the preceding month. While this primarily is a matter for the corporation's lawyer, an accountant who has access to the minute book should bring the matter to the attention of some one in authority, with the definite suggestion that the question be considered and decided one way or another.

Other questions on which the accountant should not hesitate to express his opinion and on which he should seek to co-operate with lawyers, will readily suggest themselves. For example, the determination of whether or not a profit is made on appreciation of a fixed asset through appraisal; the computation of profit or loss on conditional or installment sales; the apportionment of an extraordinary dividend between principal and income of a trust fund. In his co-operation, the accountant contributes an exact knowledge of facts and his own theories as to what constitutes a just and equitable interpretation or construction of the facts involved. On the fact, he cannot be disputed; he is entitled to the most respectful attention when he advances his theories.

The Giving of Advice

Concerning the methods by which the accountant can actually co-operate through the giving of advice, one thinks at once of his reports. E. H. H. Simmons, President of the New York Stock Exchange, said in San Francisco on November 5, 1926, that the accountant should avoid needless technical verbiage and confused grouping and arrangement of figures. By all means let him be direct. He should not follow the method of the western ranchman who estimates the number of head of cattle by counting the legs and dividing by four. Neither should he unduly emphasize in his report what the lawyer already knows. An owner of chickens once wrote to the editor of a poultry magazine asking, "What is wrong with my chickens? They go to roost in the usual way but in the morning I always find some of them flat on their backs, cold and stiff, with legs up and combs white." The editor wrote back, "The thing that is wrong with those chickens is, that they are dead."

Haskins & Sells' Bulletin for May, 1923, contained a most suggestive story of an artist who painted a picture of a barn door. It was perfectly executed from an artist's point of view, but no purchaser could be found for it. No one was interested in a picture of a barn door. And the editor extracted this moral: "A fine report without any point might better be left unrendered." At the other extreme, the Corn Exchange Bank of New York has for years been publishing its balance sheet in theater program advertisements and the balance sheet tells its story so simply and intelligibly that people have grown accustomed to look for it with some interest. One confirmed theatregoer recently boasted that he could remember the time when the Corn Exchange's surplus was only $21,781,926.72.

Whether the advice be given in a written report or letter, or orally, the accountant should make sure that the lawyer understands it. Frequently it is necessary for the accountant to explain simple bookkeeping procedure in order to clarify his recommendation. For example, under a certain partnership agreement, A was to draw $200 per week and B $100 per week, and "the amount of all such drawings shall be charged to the expense account of the business." Both A's lawyer and B's lawyer were agreed that A actually received only $50 per week more than B because through the expense account B was charged with one-half of A's extra $100 cash drawing. The desperate accountant could not argue them out of their position. They finally saw the light when simple journal entries and ledger accounts were used to demonstrate that while A was charged with one-half of the extra $100, B was charged with the other half. Considering alone the total drawings of $300, each partner was charged with $150. Since A drew $200, he gained $50, and since B drew $100, he lost $50; thus A received $100 per week more than B.

Should Fight for His Rights

In the last analysis, the accountant generally has to yield to the lawyer, but that is no reason why he should not fight for what

he believes to be right. Haskins & Sells' for January, 1927, comments on one such situation. When funds are turned over by a corporation to a trustee to redeem a bond issue, or to pay interest or dividends, the accountant usually prefers to show the funds in the hands of the trustee as an asset, with a corresponding and offsetting liability. Sometimes the corporation's lawyer will insist that both the asset and the liability be omitted, on the ground that payment to the trustee was payment to the creditor. This, of course, involves the law of agency and the lawyer's judgment should prevail. A similar problem arises in the case of an advertising agency, where the advertiser has paid the agency but the agency has not paid the publisher.

Occasionally a question will arise as to a public accountant's right to retain the working papers on which he based his report or other expression of opinion. The case of Ipswich Mills v Dillon in the Superior Court for Suffolk County, Massachusetts, held that the working papers must be delivered to the client provided that the accountant's bill had been paid, but that the accountant might keep copies as a means of defending his report or opinion if it later be questioned. This case, decided July 10th, 1926, was reported in full in the *Certified Public Accountant* for August, 1926. Sooner or later this question is bound to be adjudicated in high courts.

Cooperating with Lawyers

In order to co-operate effectively with lawyers, the accountant must of course have some knowledge of law. In 1926 I addressed the Convention of the Eastern Commercial Teacher's Association and urged that less attention be given to the teaching of actual and present-day law, with its statutory refinements, and that effort be made to teach the essential nature of law, what law really is, and how our machinery for making, enforcing and interpreting law actually functions through congress, state legislatures, executive departments, and the courts. The paper is printed in the official proceedings of that convention. At Ohio State University in June, 1925, I read a paper on "The Accountant's Duty to Uncover Questions of Law." The underlying idea of it was that the accountant should uncover but not undertake to decide questions of law. That paper is printed in the *Journal of Accountancy* for July, 1925.

Among the things which obviously an accountant should not do is the searching of a title to real property, because he might not know, or understand, the effect of various statutes of limitations, of the statute of frauds, of various liens, including the inheritance tax lien. He should not venture an opinion on the validity of a mortgage, on the rights of preferred stockholders, or the availability for dividends of premiums received on the issue of capital stock.

Perhaps the most significant single movement today is that led by Prof. William Z. Ripley of Harvard against the divorce of management from ownership. He demands among other things complete corporate publicity, and this, of course, gives the accountant through his audits and investigations a very broad opportunity to co-operate with the lawyer. He will be handicapped to some extent by a client's unwillingness, here and there, to permit a consolidated balance sheet, because it discloses too much of the corporate machinery or, on the other hand, of a client's insistence upon such a balance sheet when the accountant knows that it would conceal the weakness of a subsidiary corporation. Professor Ripley said at a meeting of the New York State Bar Association in January, 1927, "The independent audit is now earmarked for widespread adoption." The accountant in private employ has many opportunities for spreading this gospel.

A Number of Common Problems

Accountants and lawyers have a number of problems in common and as co-operation increases, the number will increase. For example, each profession needs to have its terminology rendered more definite and certain. Lawyers are confused about the difference between burden of proof and the burden of introducing evidence, and often they do not distinguish among presumption, inferences, and rule of law. "Much of the difficulty regarding assignment of contractual rights is due to different meanings which may be attached to the word assignment." (Assignment of Non-Negotiable Contracts, by Prof. Samuel Williston, Vol. 77, N. Y. Law Journal, page 352, 4-21-27.) Among accountants one finds fund and reserve used interchangeably, and very little uniformity of selection among current, quick, liquid and working, when used to designate the usually most interesting group of assets shown on the balance sheet. Lawyers have an advantage here; because courts are helpful in crystallizing definitions and lawyers have that customary technique of relying upon precedent. Accountants among themselves have always had and probably will continue to have a difficult time of it trying to make accountants generally adopt the terminology recommended by the various committees which have struggled with that slippery subject. Why not try co-operation with lawyers in this matter? A joint committee of three accountants and three lawyers, representing a society or association of accountants and a bar association, ought to be able to make a real contribution to the terminology, which is common to both professions. With improved terminology will come increased clarity of definition.

Another problem in which both are interested is that of ethical advertising. Lawyers have been helped by the advertising of banks, trust companies and title companies, because it has educated the public to some extent concerning estates, trusts, and land titles. Why is it not possible to get the banks and trust companies to advertise accountancy? They have not the direct interest in fees and commissions, but they have a real interest in the security of their loans and in the soundness of the cost accounting which underlies inventory valuations and price fixing. Co-operative advertising by bar associations has been suggested as a means of educating the public as to the lawyer's work and the advisability of consulting him before things get so bad that all he can do is to litigate or wind up the business.

Accountants and lawyers have a common problem in fee fixing, on which the only general agreement seems to be that the client should not be driven away by overcharges. The result accomplished by the work should be a much stronger factor than the time employed. A young lawyer, appointed to defend a man accused of a crime, had conscientiously spent a great deal of time on the case, but his client was convicted. The lawyer's fee of $600 was disputed and the matter was referred to an older member of the Bar. The referee thought this a fair enough compensation for the time involved, but he said, "Your client couid have been convicted for less."

Work Alike in One Respect

The lawyer's work resembles the accountant's in at least one respect. The lawyer analyzes a reported decision in much the same way that the accountant analyzes an account. The lawyer must analyze the reported facts of the case, not only to apply the rule of *obiter dicta*, to which reference was made, but also to discover, if he can, what vital facts actually led to the decision. In New York the case of Thayer v. Burr, 201, N. Y. 155, has caused estate lawyers a good deal of worry because it lays down the rule that in apportioning an extraordinary dividend, that portion due to increases in the corporation's surplus because of enhancement in asset values otherwise than from current operations is to be credited to principal. In analyzing this case the lawyer goes way beyond the printed report. He gets from the library the briefs filed by the attorneys for both sides and all the other papers used on the appeal; this being quite similar to the procedure of the accountant when he hunts up vouchers and supporting documents. Such an analysis of Thayer v. Burr shows that the decision was based on the fact that the parties had stipulated or agreed that a stated portion of the increase in surplus was due to such enhancement of asset values. Thus the decision is robbed of most

(*Continued on page 72*)

Imports of Paper and Paper Stock

NEW YORK, BOSTON, PHILADELPHIA AND OTHER PORTS

NEW YORK IMPORTS

WEEK ENDING JUNE 11, 1927

SUMMARY

Cigarette paper .....262 cs.
Wall paper .....131 bls., 37 cs.
Paper hangings .....40 bls., 4 pkgs., 16 cs.
News print .....8,695 rolls
Printing paper .....56 rolls, 92 bls., 295 cs.
Wrapping paper .....17 cs.
Packing paper .....5 bls., 48 cs.
Printed paper .....3 cs.
Paper patterns .....6 cs.
Writing paper .....10 cs.
Letter paper .....13 cs.
Envelopes .....3 cs.
Transfer paper .....2 cs.
Decalcomania paper .....50 cs.
Photo paper .....6 cs.
Tissue paper .....9 cs.
Blotting paper .....1 cs.
Surface coated paper .....4 cs.
Coated paper .....122 cs.
Baryta coated paper .....110 cs.
Drawing paper .....30 cs.
Filter paper .....10 rolls, 71 cs.
Straw paper .....2 rolls
Straw pulp board .....149 rolls
Straw board .....451 rolls
Paper tubes .....15 cs.
Miscellaneous paper
639 rolls, 9 pkgs., 293 bls., 95 cs.

CIGARETTE PAPER

R. J. Reynolds Tobacco Co., Indep. Hall, Havre, 200 cs.
British Amer. Tobacco Co., Laconia, Liverpool, 5 cs.
Standard Products Corp., France, Havre, 57 cs.

WALL PAPER

F. J. Emerich, Tuscania, Liverpool, 19 bls.
W. H. S. Lloyd & Co., Minnesota, London, 5 bls., 4 cs.
F. & R. Trading Corp., Samland, Antwerp, 86 bls.
W. H. S. Lloyd & Co., Laconia, Liverpool, 5 bls.
F. J. Emerich, Laconia, Liverpool, 16 bls.
Globe Shipping Co., Cleveland, Hamburg, 14 cs.
Keller Dorian Paper Co., France, Havre, 18 cs.
Keller Dorian Paper Co., Mauretania, Southampton, 1 cs.

PAPER HANGINGS

A. C. Dodman, Jr., Inc., Adriatic, Liverpool, 9 bls.
W. H. S. Lloyd & Co., Amer. Shipper, London, 27 bls., 5 cs.
Fezandie & Sperrle, De Grasse, Havre, 1 cs.
Keller Dorian Paper Co., De Grasse, Havre, 5 cs.
A. C. Dodman, Jr., Inc., Laconia, Liverpool, 4 bls.
O. G. Hempstead & Co., France, Havre, 4 pkgs.
Whiting & Patterson Co., Inc., Homeric, Southampton, 3 cs.
Whiting & Patterson Co., Inc., Mauretania, Southampton, 2 cs.

NEWS PRINT

N. Y. American, Malaren, Hallstavik, 1,453 rolls.
Hudson Trading Co., Malaren, Ortviken, 150 rolls.
N. Y. Telegram, Humberarm, Corner Brook, 3,901 rolls.
Bank of Montreal, Humberarm, Corner Brook, 475 rolls.
Brooklyn Times, Humberarm, Corner Brook, 1,089 rolls.
Brooklyn News, Humberarm, Corner Brook, 540 rolls.
New York Post, Humberarm, Corner Brook, 138 rolls.
Bank of Montreal, Humberarm, Corner Brook, 662 rolls.
The Times Co., Gripsholm, Gothenburg, 78 rolls.
M. Gottesman & Co., Inc., Gripsholm, Gothenburg, 209 rolls.

PRINTING PAPER

Miller Wright Paper Co., Volendam, Rotterdam, 2 cs.
Japan Paper Co., Volendam, Rotterdam, 8 cs.
Perry, Ryer & Co., Cameronia, Glasgow, 75 cs.
Japan Paper Co., Amer. Shipper, London, 5 cs.
J. J. Shore & Co., Columbus, Bremen, 24 cs.
P. C. Zuhlke, Samland, Antwerp, 74 cs.
Oxford University Press, Laconia, Liverpool, 5 cs.
Keuffel & Esser Co., Cleveland, Hamburg, 102 cs.
Perkins, Goodwin & Co., Cleveland, Hamburg, 56 rolls.
C. B. Richard & Co., Cleveland, Hamburg, 61 bls.
J. H. Scott Paper Co., Cleveland, Hamburg, 31 bls.

WRAPPING PAPER

Birn & Wachenheim, Samland, Antwerp, 17 cs.

PACKING PAPER

Steffens, Jones & Co., West Arrow, Rotterdam, 5 bls. 4 cs.
Quality Art Novelty Co., Cleveland, Hamburg, 15 cs.
Haule Wax Paper Manfg. Co., Cleveland, Hamburg, 19 cs.
Schenckers, Inc., Cleveland, Hamburg, 10 cs.

PRINTED PAPER

H. Hubbard, France, Havre, 2 cs.
Cheramy, Inc., France, Havre, 1 cs.

PAPER PATTERNS

Home Pattern Co., Inc., Homeric, Southampton, 6 cs.

WRITING PAPER

Halle Bros., Indep. Hall, Havre, 3 cs.
F. R. Lazarus, Indep. Hall, Havre, 2 cs.
Stern Bros., Schodack, Dunkirk, 1 cs.
J. E. Bernard & Co., Mauretania, Southampton, 4 cs.

LETTER PAPER

Halliburton Abbot Co., France, Havre, 6 cs.
Rorabaugh Dry Goods Co., France, Havre, 3 cs.
Rorabaugh Paxton Dry Goods Co., France, Havre, 2 cs.
Rorabaugh Wiley Dry Goods Co., France, Havre, 2 cs.

ENVELOPES

Japan Paper Co., Amer. Shipper, London, 3 cs.

TRANSFER PAPER

Hensel, Bruckman & Lorbacher, Volendam, Rotterdam, 2 cs.

DECALCOMANIA PAPER

B. F. Drakenfeld & Co., Adriatic, Liverpool, 33 cs.
L. A. Consmiller, Columbus, Bremen, 6 cs.
C. W. Sellers, Columbus, Bremen, 4 cs.
C. W. Sellers, G. Washington, Bremen, 7 cs.

PHOTO PAPER

J. H. Schroeder Banking Corp., Columbus, Bremen, 6 cs.

TISSUE PAPER

H. W. Robinson & Co., De Grasse, Havre, 5 cs.
Meadows, Wye & Co., Laconia, Liverpool, 4 cs.

BLOTTING PAPER

M. Goldfish, Samland, Antwerp, 1 cs.

SURFACE COATED PAPER

G. W. Sheldon & Co., Tuscania, London, 1 cs.
Hensel, Bruckman & Lorbacher, Cleveland, Hamburg, 3 cs.

COATED PAPER

Gevaert Co. of America, Samland, Antwerp, 122 cs.

BARYTA COATED PAPER

Globe Shipping Co., Columbus, Bremen, 110 cs.

DRAWING PAPER

International Forwarding Co., Tuscania, London, 2 cs.
H. Reeve Angel & Co., Inc., Tuscania, London, 13 cs.
Keuffel & Esser Co., Cleveland, Hamburg, 15 cs.

FILTER PAPER

H. Reeve Angel & Co., Inc., Tuscania, London, 6 cs.
C. Schleicher Schull Co., Cleveland, Hamburg, 5 cs.
E. Fougera & Co., La Bourdonnais, Bordeaux, 60 cs.
Blackman & Blackman, La Bourdonnais, Bordeaux, 10 rolls.

STRAW PAPER

Grand Corrugated Paper Co., Inc., West Arrow, Antwerp, 2 rolls.

STRAW PULP BOARD

J. P. Heffernan Paper Co., Volendam, Rotterdam, 149 rolls.

STRAW BOARD

Perkins, Goodwin & Co., Volendam, Rotterdam, 451 rolls.

PAPER TUBES

H. de Maguinn, France, Havre, 15 cs.

MISCELLANEOUS PAPER

Otter Manfg. Co., West Arrow, Rotterdam, 1 cs.
P. H. Petry & Co., Volendam, Rotterdam, 9 cs.
Baldwin Shipping Co., De Grasse, Havre, 6 cs.
Arkell Safety Bag Co., Gripsholm, Gothenburg, 232 rolls, 23 bls.
Manhattan Paper Co., Gripsholm, Gothenburg, 87 bls.
The Borregaard Co., Inc., Gripsholm, Gothenburg, 183 bls., 407 rolls.
E. H. Sergeant & Co., Gripsholm, Gothenburg, 8 cs.
Schmidt & Pritchard, Inc., Cleveland, Hamburg, 3 cs.
Freedman & Slater, Cleveland, Hamburg, 2 cs.
Phoenix Shipping Co., Cleveland, Hamburg, 5 cs.
J. R. Livermore, C. Rosso, Genoa, 5 cs.
G. W. Sheldon & Co., C. Rosso, Genoa, 15 cs.
E. & J. Burke, Ltd., La Bourdonnais, Bordeaux, 1 cs.
P. H. Petry & Co., France, Havre, 4 pkgs.
American Shipping Co., France, Havre, 5 pkgs.
A. L. Diament & Co., France, Havre, 6 cs.
Japan Paper Co., France, Havre, 27 cs.
Guibout freres, France, Havre, 3 cs.
H. H. Ayer, France, Havre, 4 cs.

RAGS, BAGGINGS, ETC.

V. Galaup, Savoia, Leghorn, 32 bls. rags.
Bulkley, Dunton & Co., West Arrow, ——, 39 bls. rags.
E. Butterworth & Co., Inc., West Arrow, Antwerp, 168 bls bagging.
E. Butterworth & Co., Inc., West Arrow, Antwerp, 20 bls. jute waste.
E. Butterworth & Co., Inc., West Arrow, Antwerp, 32 bls. flax waste.
E. J. Keller Co., Inc., West Arrow, Antwerp, 93 bls. bagging.
E. J. Keller Co., Inc., West Arrow, Antwerp, 33 bls. bagging.
V. Galaup, Indep. Hall, Havre, 94 bls. rags.
Royal Manfg. Co., Indep. Hall, Dunkirk, 42 bls. rags.
Equitable Trust Co., Indep. Hall, Dunkirk, 24 bls. rags.
E. J. Keller Co., Inc., Volendam, Rotterdam, 51 bls. rags.
Chemical National Bank, Volendam, Rotterdam, 5 bls. rags.
Castle & Overton, Inc., Volendam, Rotterdam, 26 bls. rags.
Bulkley, Dunton & Co., Volendam, ——, 77 bls. bagging.
J. Cohen Sons Co., Adriatic, Liverpool, 26 bls. rags.
J. Cohen Sons Co., Tuscania, London, 27 bls. paper stock.
Castle & Overton, Inc., Tuscania, London, 27 bls. rags.
Castle & Overton, Inc., Cameronia, Glasgow, 50 bls. bagging.
Brown Bros. & Co., Cameronia, Glasgow, 18 bls. rags.
R. F. Downing & Co., Amer. Shipper, London, 98 bls. rags.
Bulkley, Dunton & Co., De Grasse, ——, 133 bls. rags.
E. J. Keller Co., Inc., Lituania, Danzig, 657 bls. rags.
Railway Supply & Manfg. Co., Tijuca, Antwerp, 243 bls. flax waste.
E. J. Keller Co., Inc., Tijuca, Antwerp, 395 bls. flax waste.
J. Cohen Sons Co., Laconia, Liverpool, 18 bls. rags.
W. Steck & Co., Orizaba, Havana, 70 bls. rags.
Flintkote Co., N. Y. City, Bristol, 90 bls. rags.
Bulkley, Dunton & Co., Ambridge, ——, 71 bls. rags.
Bulkley, Dunton & Co., Schodack, ——, 43 bls. rags.
D. M. Hicks, Inc., Schodack, Dunkirk, 26 bls. rags.
Salomon Bros. & Co., Schodack, Dunkirk, 21 bls. rags.
Royal Manfg. Co., Schodack, Dunkirk, 64 bls. rags.
Castle & Overton, Inc., Hatteras, Ireland, 87 bls. rags.

OLD ROPE

International Forwarding Co., Indep. Hall, Havre, 124 coils, 4 bls.

(*Continued on page 68*)

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Sales Offices

Boston Chicago Atlanta Pittsburgh Philadelphia

Imports of Paper and Paper Stock

(*Continued from page 66*)

Brown Bros. & Co., Volendam, Rotterdam, 92 pkgs., 49 coils, 58 bls.
Brown Bros. & Co., Tuscania, London, 40 pkgs.
Brown Bros. & Co., N. Y. City, Bristol, 86 coils.

CHINA CLAY

J. W. Higman Co., West Katan, Fowey, 1,590 tons, 10 cwt.
J. Richardson, West Katan, Fowey, 704 tons, 2 cwt.
Atlantic National Bank, West Katan, Fowey, 1,001 tons, 12 cwt.

WOOD PULP

M. Gottesman & Co., Inc., Columbia, Trieste, 2,562 bls. wood pulp.
Scandinavian Pulp Agency, Inc., Malaren, Skutskar, 3,820 bls. wood pulp.
Johanson, Wales & Sparre, Inc., Malaren, Ortviken, 1,200 bls. wood pulp.
Johanson, Wales & Sparre, Inc., Svendborgsund, Hernosand, 300 bls. sulphite, 50 tons.
Johanson, Wales & Sparre, Inc., Svendborgsund, Hernosand, 300 bls. sulphate, 50 tons.
E. M. Sergeant & Co., Svendborgsund, Hernosand, 3,000 bls. sulphite, 500 tons.
Pagel, Horton & Co., Inc., Svendborgsund, Hernosand, 3,000 bls. sulphite, 500 tons.
J. Anderson & Co., Svendborgsund, Hernosand, 1,200 bls. sulphite, 200 tons.
Bulkley, Dunton & Co., Svendborgsund, ——, 5,250 bls. wood pulp.
E. M. Sergeant & Co., Gripsholm, Gothenburg, 350 bls. sulphite.
E. M. Sergeant & Co., Gripsholm, Gothenburg, 299 bls. dry soda pulp.
Bulkley, Dunton & Co., Cleveland, ——, 125 bls. wood pulp, 25 tons.

WOOD FLOUR

F. B. Vandegrift & Co., Ambridge, Rotterdam, 400 bls., 20,000 kilos.
H. J. Baker & Bro., Ambridge, Rotterdam, 1,000 bls., 50,000 kilos.

CASEIN

T. M. Duche & Sons, Canadian Challenger, Auckland, 267 bags.
Atterbury Bros., Inc., Amer. Legion, Buenos Aires, 417 bags.
Kalbfleisch Corp., Amer. Legion, Buenos Aires, 3,385 bags.
Kalbfleisch Corp., Western World, Buenos Aires, 2,334 bags.
Brown Bros. & Co., La Bourdonnais, Bordeaux, 40 bags.

BALTIMORE IMPORTS

WEEK ENDING JUNE 11, 1927

A. D. Jones, Indep. Hall, Havre, 1 cs. writing paper.
Congoleum Nairn Co., Indep. Hall, Havre, 832 bls. rags.
V. Galaup, Indep. Hall, Havre, 152 bls. rags.
Congoleum Nairn Co., Indep. Hall, Dunkirk, 389 bls. rags.
Baltimore Post, Humberarm, Corner Brook, 1,475 rolls news print.
Washington News, Humberarm, Corner Brook, 982 rolls news print.
Washington Star, Humberarm, Corner Brook, 1,134 rolls news print.
Castle & Overton, Inc., Westerner, Holland, 180 bls. wood pulp.
Castle & Overton, Inc., Goettingen, Germany, 1,667 bls. wood pulp.
Bulkley, Dunton & Co., Minnequa, ——, 1,550 bls. wood pulp.

PHILADELPHIA IMPORTS

WEEK ENDING JUNE 11, 1927

Wolsey Import Co., West Arrow, Rotterdam, 253 bls. rags.
E. J. Keller Co., Inc., West Arrow, Antwerp, 267 bls. rags.
S. S. Alcorn, West Arrow, Antwerp, 30 bls. wrapping paper.
Union National Bank, West Arrow, Antwerp, 97 bls. rags.
MacBlaine Co., West Arrow, Antwerp, 4 bls. rags.
M. Friedman, West Arrow, Antwerp, 140 bls. rags.
Castle & Overton, Inc., West Arrow, Antwerp, 293 bls. rags.
D. I. Murphy, West Arrow, Antwerp, 27 coils old rope.
D. I. Murphy, West Arrow, Antwerp, 126 bls. rags.
E. A. Stone, West Arrow, Antwerp, 194 bls. rags.
J. A. Steer & Co., N. Y. City, Bristol, 118 bls. rags.
Chase National Bank, N. Y. City, Bristol, 89 coils old rope.
Congoleum Nairn Co., City of St. Joseph, Leghorn, 37 bls. rags.
E. J. Keller Co., Inc., Binnendyk, Amsterdam, 10 bls. rags.
E. J. Keller Co., Inc., Montanan, ——, 75 bls. rags.
Castle & Overton, Inc., Valemore, England, 55 bls. rags.
Castle & Overton, Inc., Nobles, France, 255 bls. rags.
Castle & Overton, Inc., Goettingen, Germany, 50 bls. rags.
Castle & Overton, Inc., Goettingen, Germany, 1,647 bls. wood pulp.
Castle & Overton, Inc., Seattle Spirit, Denmark, 191 coils old rope.
Castle & Overton, Inc., London Commerce, England, 227 bls. rope, 72 bls. rags.
Castle & Overton, Inc., Sarcoxie, France, 1,323 bls. rags.
Bulkley, Dunton & Co., Saga, ——, 1,250 bls. wood pulp.
Bulkley, Dunton & Co., Harburg, ——, 25 bls. rags.
Bulkley, Dunton & Co., Holstein, ——, 57 bls. rags.
Bulkley, Dunton & Co., Kari Skogland, ——, 189 bls. rags.
Bulkley, Dunton & Co., Waukegan, ——, 60 bls rags.

BOSTON IMPORTS

WEEK ENDING JUNE 11, 1927

Atlantic National Bank, West Katan, Fowey, 3,453 tons, 18 cwt. china clay.
Bulkley, Dunton & Co., Svendborgsund, ——, 4,200 bls. wood pulp.
J. Anderson & Co., Svendborgsund, Soderham, 1,000 bls. sulphite, 200 tons.
Pagel, Horton & Co., Inc., Svendborgsund, Hernosand, 1,800 bls. sulphite, 300 tons.
J. Anderson & Co., Svendborgsund, Hernosand, 600 bls. sulphite, 100 tons.
Johanson, Wales & Sparre, Inc., Svendborgsund, Hernosand, 600 bls. sulphate, 100 tons.
Johanson, Wales & Sparre, Inc., Svendborgsund, Hernosand, 306 bls. sulphite, 51 tons.
American Exchange Irving Trust Co., Svendborgsund, Hernosand, 8,520 bls. sulphate, 970 tons.
J. T. Lodge, Tijuca, Antwerp, 14 bls. rags.
National Shawmut Bank, Tijuca, Antwerp, 40 bls. rags.
Spaulding Fibre Co., Tijuca, Antwerp, 593 bls. flax waste.
2nd National Bank, Tijuca, Antwerp, 107 bls. rags.
National Bank of Boston, Samland, Antwerp, 50 bls. wrapping paper.
2nd National Bank, Samland, Antwerp, 212 bls. bagging.
Spaulding Fibre Co., Samland, Antwerp, 700 bls. flax waste.
N. Y. Cordage Co., Samland, Antwerp, 42 coils rope.
Atlantic National Bank, Laconia, Liverpool, 18 bls. rags.
J. T. Lodge, Laconia, Liverpool, 10 bls. rags.
G. F. Malcolm, Laconia, Liverpool, 10 cs. tissue paper.
Bulkley, Dunton & Co., Binnendyk, ——, 138 bls. wood pulp.
Bulkley, Dunton & Co., Binnendyk, ——, 100 bls. rags.
Bulkley, Dunton & Co., Ambridge, ——, 78 bls. rags.

NEWPORT NEWS IMPORTS

WEEK ENDING JUNE 11, 1927

Scandinavian Pulp Agency, Inc., Malaren, Wilstavarf, 2,500 bls. sulphite pulp.
Johanson, Wales & Sparre, Inc., Malaren, Ortviken, 1,250 bls. sulphite pulp.

PORTLAND IMPORTS

WEEK ENDING JUNE 11, 1927

The Borregaard Co., Inc., Malaren, Hurum, 1,122 bls. sulphate pulp.
Waterfalls Paper Co., Malaren, Gothenburg, 5,000 bls. wood pulp.
Waterfalls Paper Co., Malaren, Gothenburg, 31 bls. paper.

NORFOLK IMPORTS

WEEK ENDING JUNE 11, 1927

E. J. Keller Co., Inc., Mississippi, London, 20 bls. rags.

NEW ORLEANS IMPORTS

WEEK ENDING JUNE 11, 1927

Castle & Overton, Inc., Duquesne, England, 276 bls. rags.
Castle & Overton, Inc., Baltimore Maru, Japan, 200 bls. rags.

Norwegian Pulp and Paper Industry Expands

WASHINGTON, D. C., June 8, 1927.—A steady program of expansion has been going forward in the Norwegian pulp and paper industries during the past year, which has greatly increased the productive capacity of the industries, states a report to the Department of Commerce from Commercial Attache H. Sorensen, Oslo.

Two new mechanical ground wood mills, the Gjeving Traesliperi and the Granfos Bruks nye Sliperi, with a combined annual capacity of 10,500 metric tons (metric tons equivalent to 2,205 pounds) began operation during 1926. In addition to these new mills, the annual capacity of the Sande traesliperi and the Risr traemassefabrik has been doubled, bringing the potential output of the former up to 17,500 tons and of the latter to between 14,000 and 15,000 tons. The hunsfos fabrikker has also increased its productive capacity by 5,000 to 6,000 tons, and is now capable of an output of over 25,000 tons yearly. Considerable additions have also been made in the capacity of other mills, increasing, it is believed, the total annual production of Norwegian ground wood mills, which was formerly in the neighborhood of 400,000 tons, by some 10 to 15 per cent. Further expansions which are under way will increase the capacity of the mills by close to 25,000 tons dry weight.

The chemical pulp mills have likewise been engaged in a program of modernization of equipment and increasing production. Two new plants, which will be completed during the coming summer will increase the output of sulphate by about 6,000 tons and of sulphite by 14,000 tons yearly.

The paper mills have followed the movement initiated by the pulp mills, increasing the capacity of old machines and installing new and modern equipment.

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SHREDDING AND BALING EFFICIENCY

Saving at Beater

Entire Bale immediately absorbed.

Horsepower cut one third.

Tremendous saving in upkeep.

Maintaining High Test

As pulp does not come in contact with any hot surface, strength test the same as use of wet pulp.

Are You Paying Freight on Water

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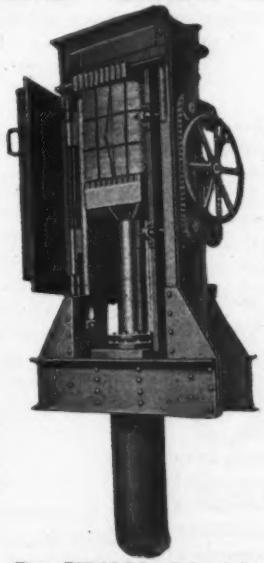

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New York Market Review

Office of THE PAPER TRADE JOURNAL,
Wednesday, June 15, 1927.

Trading in the local paper market was rather light during the past week, due to a number of causes, notably the holiday spirit which has prevailed since Colonel Lindburg's arrival in New York to receive the unparalleled honors he won by his record flight to Paris. However, the paper industry remains in a strong position and prices are holding up to previously quoted levels, with little talk of concessions.

News print continues in good demand and consumers are taking a satisfactory volume on contract. According to the News Print Service Bureau, the United States mills operated at 83.8 per cent of rated capacity during May, and the Canadian mills at 86.7 per cent. Stocks of news print at Canadian mills totalled 27,520 tons at the end of May, and at United States mills 24,233 tons, making a combined total of 51,753 tons, which was equivalent to 3.9 days' average production.

The various grades of paper board are still in good request and quotations continue steady to firm. Demand for fine papers is fairly satisfactory and prices are practically unaltered. The coarse paper market is exhibiting a strong undertone and wrapping paper and summer specialties are still going strong.

Mechanical Pulp

Conditions in the ground wood market are little changed. Offerings in the spot market are generous and the demand is fairly persistent. Domestic mechanical pulp is quoted at from $27 to $30 a ton, f.o.b. mill, while moist imported ground wood is selling at from $30 to $32 a ton, and dry at from $34 to $36 a ton, ex dock, Atlantic ports.

Chemical Pulp

Greater activity prevailed in the chemical pulp market during the past week than for some time and an excellent volume of new business was closed at the present attractive prices. Imported bleached sulphite is still selling at from 3.50 to 4.50, ex dock, Atlantic ports. Domestic bleached sulphite is offered at from 3.40 to 4.75, f.o.b. pulp mill.

Old Rope and Bagging

Demand for both domestic and imported old rope has been mostly limited to small orders for immediate requirements. Prices are generally being maintained in a satisfactory manner. The mills are displaying a fair amount of interest in bagging, especially the roofing grades. Prices remain unchanged, in most instances.

Rags

Steadiness prevails in the domestic rag market. Cotton cuttings continue in good request and roofing rags are also in excellent demand. Prices are holding up to recently quoted levels. The foreign rag market is rather quiet. Rags abroad are difficult to obtain at attractive prices, due to the heavy home consumption in Europe.

Waste Paper

Business in the paper stock market during the past week showed little signs of improvement, although demand for some of the grades was fairly active. Old kraft machine compressed bales are still moving in good volume and a moderate request is being experienced for old news and mixed papers. Prices are generally unchanged.

Twine

While the twine market is rather quiet at present and the bulk of the business transacted is mostly routine, prices remain practically unchanged from previously reported levels. The position of the twine industry is considered satisfactory for the time of the year and dealers are looking forward to the fall campaign with confidence, according to close observers of the situation.

C. A. Crocker Gets Honorary Degree

[FROM OUR REGULAR CORRESPONDENT]

HOLYOKE, Mass., June 14, 1927.—Clifton A. Crocker of Springfield, head of the Crocker-McElwain Company and Chemical Paper Manufacturing Company, of this city, received the honorary degree of Master of Humanics at the baccalaureate services of the Springfield International College last week. Mr. Crocker has been repeatedly honored in Springfield, and is now vice president of the Springfield National Bank and trustee of the Y. M. C. A. College.

Mr. Crocker is as much a Holyoker as a citizen of Springfield and is highly regarded here. He first came to Holyoke in 1878 as a clerk at the Crocker Manufacturing Company mill, now a division of the American Writing Paper Company. This was founded in 1871, the first president being S. S. Crocker, and the first Agent and Treasurer being Daniel P. Crocker. The first secretary was the late George E. Dudley of Syms & Dudley. In 1880 he was made secretary of the company. In 1884 he removed to Easthampton, returning to Holyoke in 1886 to become Treasurer of the Company, a position he held until the combine was formed in 1899.

Record Attendance Expected at Safety Conference

[FROM OUR REGULAR CORRESPONDENT]

APPLETON, Wis., June 11, 1927.—When the annual Fox River Valley Safety Conference takes place at Sheboygan, Wis., on Tuesday, June 14, it is expected to be the largest of these gatherings held thus far. Mills are sending delegations from each department in some cases, and foremen and superintendents will attend almost without exception.

The paper and pulp mill section of the conference will be the largest of the group meetings scheduled for the morning. General meetings will be held in the afternoon, and there will be a dinner in the evening. Attendance is expected to exceed 1,000 persons.

Bids for Government Paper

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., June 14, 1927.—The Government Printing Office has received the following bids for 5,000 sheets of 22 x 28 red railroad board: Whitaker Paper Company, $35.63 per M sheets; R. P. Andrews Paper Company, $42.00; Mathers-Lamm Paper Company, $35.63; Holyoke Card and Paper Company, $36.50; Barton, Duer & Koch Paper Company, $36.00; Stanford Paper Company, $35.92; United Paperboard Company, $37.50; and Virginia Paper Company, $33.08.

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The quality of a sheet sized with Quartz Quality Silicate of Soda justifies its use. But there is yet another advantage in adding silicate to the beater. It saves expensive raw materials such as rosin, color, starch and fiber, too, by retaining larger proportions of all in the sheet. Make a better paper at less cost with Quartz Quality Silicate of Soda.

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Special felts to meet every condition.
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75-77 Duane St., N. Y., and direct

Miscellaneous Markets

Office of THE PAPER TRADE JOURNAL,
Wednesday, June 15, 1927.

Notwithstanding the approach of the mid-summer season, the volume of business transacted in the local chemical market during the past week was well up to average. Contract withdrawals are being maintained at a steady pace. Quotations are holding up very well in most sections of the industrial chemical trade, and there is little talk of concessions around.

BLANC FIXE.—The undertone of the blanc fixe market is strong. Both the pulp and the powder have been in good request lately and prices are somewhat firmer. The pulp is still quoted at $60 per ton, in bulk, at works, while the powder is selling at from 4⅛ cents to 4⅜ cents a pound, in barrels, at works.

BLEACHING POWDER.—Steadiness continues to prevail in the bleaching powder market. Supplies have been moving into consumption at an excellent rate. Prices remain steady and unaltered. Bleaching powder is still quoted at from $2 to $2.40 per 100 pounds, in large drums, at works, according to quantity.

CASEIN.—Business in the casein market has been rather quiet of late. The slight advances recently recorded are being maintained with little difficulty. Domestic casein is offered at from 18½ cents to 19½ cents a pound, and imported casein is quoted at from 18 cents to 18¾ cents a pound, all in bags, car lot quantities.

CAUSTIC SODA.—Contract withdrawals of caustic soda have been larger so far this month than in the closing days of May. Demand has improved and the market is in a sound position. Prices are holding up to schedule. Caustic soda is selling at from $3 to $3.10 per 100 pounds, in large drums, at works. Spot car lots are quoted at $3.20 per 100 pounds.

CHINA CLAY.—Conditions in the china clay market are practically unchanged. Both imported and domestic grades continue to move into consumption in good volume on standing contracts. The quotation on imported china clay ranges from $15 to $25 a ton, in bulk, ship side. Domestic paper maker's clay is selling at from $8 to $9 a ton, at mine, and pulverized at from $10 to $12 a ton.

CHLORINE.—The tone of the chlorine market remains steady. Shipments against contract have been moving in a satisfactory manner. Stocks are reported to be limited and prices are firm. Chlorine is quoted at 4 cents a pound, in tanks, or multi-unit cars, at works, on contract, while the spot price is from 4¼ cents to 4½ cents a pound.

ROSIN.—Some improvement has been noticed in the demand for rosin. Prices continue to fluctuate slightly without any drastic tendencies. At the naval stores, the grades of gum rosin used in the paper mills are now offered at from $10.20 to $10.40 per 280 pounds, ex dock, in barrels. Wood rosin remains unchanged at $9.50 per 280 pounds, at southern shipping points.

SALT CAKE.—Most of the business transacted in the salt cake market during the past week was along routine lines. Contract shipments of salt cake are reported to be moving at an excellent rate. Prices are steady and unchanged. Salt cake is still quoted at from $18 to $19 a ton, in bulk, at works. Chrome salt cake is offered at from $14 to $15 a ton, in bulk, at works.

SODA ASH.—Demand for soda ash was persistent during the past week. Consumers are said to be taking full quotas on their present contracts. Prices are holding up to schedule. Contract quotations, in car lots, at works, are as follows: in bulk, $1.20; in bags, $1.32½, and in barrels, $1.57½.

STARCH.—No changes were recorded in the starch market during the week. Consumption of this product is being maintained in good volume and prices are holding up to the levels which have prevailed for some time. Special paper makers' starch is still quoted at $3.07 per 100 pounds, in bags, and at $3.24 per 100 pounds, in barrels.

SULPHATE OF ALUMINA.—Seasonal routine prevails in the sulphate of alumina market. Contract shipments are being maintained in a normal manner. Prices remain unchanged. Commercial grades of sulphate of alumina are selling at from $1.40 to $1.50 per 100 pounds, in bags, at works, in car lots. The iron free is offered at from $2 to $2.05 per 100 pounds, in bags, at works.

SULPHUR.—The position of the sulphur market remains unchanged. Demand for this product is satisfactory for the time of the year and supplies are moving into consumption in a normal manner. Prices are unaltered. Sulphur is still selling at from $18 to $19 a ton, in bulk, at mine, on contract orders. The spot quotation is $20 a ton.

TALC.—Manufacturers of talc are maintaining the former schedule of prices, in most instances, and report a steady request from the mills. Stocks are adequate for immediate needs, but are not believed to be excessive. Domestic talc is selling at from $16 to $18 a ton, at mine. Imported talc is quoted at from $18 to $20 a ton, ship side.

ACCOUNTANTS AND ATTORNEYS

(Continued from page 65)

of its force because its application is confined to the unique facts of its particular case.

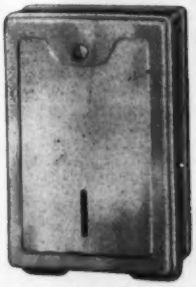
Accountants and lawyers are distributed today over the matter of educational requirements for admission to their professions. Accountants are meeting it in their endeavor to have reciprocity among the states and in their efforts to secure restrictive legislation. Lawyers are inquiring whether or not the limited educational qualifications may account in part for the great number of the totally unfit practitioners who are now making a living in the law as a business. The matter of preliminary education for lawyers has attained such importance in New York that on March 4, 1927, the Court of Appeals in Albany held a public hearing on it, at the petition of the Bar Association of the City of New York and of the New York County Lawyers Association. At present only a high school education is required; it is proposed to require part or all of a college course.

A Close Question

This is a close question. So far as both professions are concerned, character in the beginner is more important than technical ability and less likely to be developed in later life. It may be true that virtues grow on an intellectual stalk and right conduct is thought-out conduct, but certainly "knowledge and wisdom, far from being one, ofttimes have no connection." Last July, certain embryonic lawyers started in with their tricks even before they were admitted to the Bar, when there was so much cheating at the bar examination in a mid-western state that the Supreme Court of the state made an official investigation. Reports do not show how many of the cheaters were college trained. Perhaps what these boys should have done was to pray to the same patron saint that Sir Frederick Pollock refers to in his "Essays in Law." In the old days, students used to pray before examination but Sir Frederick never found out whether the saint strengthened the minds of the students or softened the hearts of the examiners. In February, 1927, at the congress of the Council on Medical Education of the American Medical Association, character clinics were advocated for students. The Chairman of the Council wants medical colleges to try to develop character and honesty, to overcome, among other evils, the unnecessary operation.

Challenges Earnest Thought

This whole subject of co-operation between the two professions of law and accountancy is one which challenges the earnest thought of the serious minded of each. Chancellor Brown of New York University said in his baccalaureate sermon on June 7th, 1925: "Who thinks in relative terms and in terms of progressive relationship, thinks more deeply than he whose world is static, ruled from without, a moral autocracy. But he who thinks still more deeply, finds relations grounded in ultimate reality."



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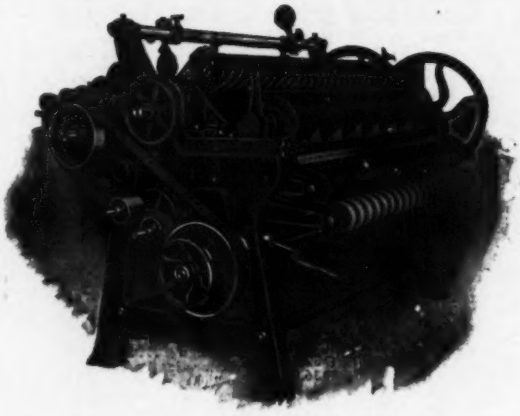

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Market Quotations

Quoted by Hepburn & Co., 74 Broadway, N. Y. City, to whom all inquiry for quotations on these or any other Securities is referred.

BONDS	BID	OFFERED
Advance Bag & Paper, 7s 1943	103	106
A. P. W. Pulp & Power, 7s 1945	101	102
American Writing Paper, 6s 1947	79	82
Bastrap Pulp & Paper, 6½s 1940	100	103
British Columbia Pulp & Paper, 6s 1950	85	90*
Beaver Products Corp., 7½s 1942	106	109
Berkshire Hills Paper, 8s 1941	60	80
Brown Paper Co., 1st 5½s 1946	94	98
Bryant Paper Co., 6s 1942	100½	102
Cape Breton Pulp & Paper, 6s 1932	101	103
Central Paper Serial 6, 6½s 1942	89	...
Champion Coated Paper, 6s 1926 to 1932	98	...
Champion Fibre, 8s 1930	100	...
Champion Paper Corp'n, 1st 6s 1945	94	97
Continental Paper Products, 6½s 1943	88	91½
Cornell Wood Prod., 7½s 1937	100	104*
Crown Willamette Paper, 6s 1951	97	101
Donnaconna Paper, 6s 1940	100½	102
Dells Paper & Pulp Serial, 6s 1926-38	*95	...
Eastern Mfg. Co., 7s 1938	90	93
Eddy Paper, 7½s 1931	102	104
Escanaba Paper Serial, 6s 1926-39	93	95
Fiber Fibre Serial, 7s 1926-39	95	...
Fort Orange Paper, 7s 1942	95	100*
Fox River Paper, 7s 1931	99	...
Gair Co. (The Robt.), 7s 1937	104	106
Gilbert Paper Co., 6½s 1926-29	89	...
Hammermill Paper, 6s 1939	100	103*
Hoberg Paper & Fibre, 7s 1937	94½	96
Itaska Paper & Prairie River Power, J+5½s 1926-38	94	96*
Itaska Paper 1st, 6s 1933-38	96	98*
Kalamazoo Veg. Parchment, 6s 1938	98	...
Marinette & Menominee, 7½s 1936	101	...
Mead Pulp & Paper, 5% Notes, 1927-37	90	95
Menasha Printing & Carton, 6½s 1939	99½	...
Mengel Company, 7s 1926 to 1934	100*	102
Monroe Paper Products, 7½s 1932	96	...
Munising Paper, 6s 1927-36	96	100
Nekoosa Edwards, 1st Ref. 6s 1928 to 1942	96	99*
Orono Pulp & Paper, 6s 1943	98	...
Orono Pulp & Paper, 5s 1941	94	...
Oswego Falls Corp., 6s 1941	98	100*
Oxford Paper, 6s 1947	100	...
Paepcke Paper Mills, 7s 1930	99	None
Parsons Pulp & Lumber, 7s 1928	97	...
Parker Young Co., 6½s 1944	95	99
Paterson Parchment Paper, 6s 1938	100½	102
Penobscot Chemical Fibre, 6s 1942	98	...
Poland Paper, 7s 1930	98	...
Port Alfred Pulp, 6½s 1943	*96	...
Queens City Paper, 7s 1932	95	100*
Richardson Co., 6s 1938	100	...
Spanish River Pulp & Paper, 8s 1941	106	110
Stevens & Thompson Paper, 6s 1942	91	94
St. Anne Paper, 6½s 1946	95½	98*
St. Croix Paper, 5s 1926-37	95	98*
St. Regis Paper Serial, 6½s 1926-35	98½	...
Tait Paper & Color Industries, 6s 1934	85	93
Taggart Bros. Co., 6s 1944	94	97
Ticonderoga Pulp & Paper, 5s 1930	95	98
Ticonderoga Pulp & Paper, 6s 1940	98½	100*
Warren (The S. D.) Company, 6s 1945	98	101
Wotab Paper, 6½s 1943	102	...
Westfield River Paper, 7s 1926-43	Wanted	...
Whitaker Paper, 7s 1942	106	108
Witmer-Parsons Pulp & Lbr. (Units)	63	70

STOCKS	BID	ASKED
Advance Bag & Paper, 8% Pfd.	97	100*
Am. Tissue Mills, 7% Pfd.	95	100
British Columbia P. & P., Pfd.	65	70
Brompton Pulp & Paper, 8% Pfd.	93	98*
Brown Corpn., 7% Pfd.	97	100*
Champion Fibre, 7% Pfd.	99	103*
Diem & Wing, 7% Cum. Pfd.	87	...
Donnaconna Paper, Com.	58	...
Donnaconna Paper, Pfd.	95	100
Eastern Mfg. Co., 1st Pfd.	34	37
Great Northern Paper (new)	60	70
Hammermill Paper, 7% Pfd.	105	110
Hinde & Dauch, Com.	135	...
Hinde & Dauch, Pfd.	100	...
Holyoke Card & Paper	150	None
Marathon Paper Mills, Com.	125	...
Midwest Box Co., Pfd. 8%	80	85
Midwest Box Co., Pfd. 6%	55	65
Louis De Jonge Co., 7% Pfd.	93	96
Oxford Papers, Com.	102	...
Oxford Paper Co., Pfd.	100	105
Penobscot Chemical Fibre, Com.	65	75*
Richardson Co., 7% Pfd.	104	...
Rubberoid Company	73	77
Seaman Container, Class B (par $1)	1	None Off.
Seaman Paper Co.	Wanted	None Off.
St. Croix Paper	150	170
St. Regis Paper Co., 7% Cum. Pfd.	97	100
Westfield River Paper Co., 1st Pfd.	Wanted	None Off.
West Virginia Pulp and Paper, Com.	58	63
West Virginia Pulp and Paper, Pfd.	97	102
Whittaker Paper, 7% Cum. Pfd.	97	103

* Nominal.

Paper

(F. o. b. Mill)

Ledgers	11.00	@38.00
Bonds	9.00	@45.00
Writings—		
Extra Superfine	14.00	@32.00
Superfine	14.00	@32.00
Tub sized	10.00	@15.00
Engine Sized	8.00	@11.00
News—		
Rolls, contract	3.25	@ —
Rolls, transient	3.25	@ 3.50
Sheets	3.65	@ 3.85
Side Runs	3.00	@ 3.75
Book, Cased—		
S. & S. C.	6.35	@ 7.75
M. F.	6.25	@ 7.75
Coated and Enamel	8.00	@15.00
Lithograph	8.00	@15.00
Tissues—Per Ream—		
White No. 1	.75	@ 1.00
Anti-Tarnish	1.10	@ 1.90
Colored	1.00	@ 2.00
White No. 2	.75	@ .85
Kraft	.90	@ 1.00
Manila	.75	@ .85
Kraft—		
No. 1 Domestic	6.25	@ 6.50
No. 2 Domestic	5.25	@ 5.50
Southern	4.75	@ 5.25
Imported	6.50	@ 7.00
Manila—		
No. 1 Jute	9.00	@ 9.25
No. 2 Jute	7.75	@ 8.50
No. 1 Wood	4.75	@ 5.25
No. 2 Wood	4.00	@ 4.50
Butchers	3.75	@ 4.25
Fibre Papers—		
No. 1 Fibre	5.00	@ 5.50
No. 2 Fibre	4.75	@ 5.25
Common Bogus	2.75	@ 3.00
Screenings	3.00	@ 3.25
Card Middles	4.00	@ 5.00
Glassine—		
Bleached, basis 25 lbs.	13.00	@16.00
Bleached, basis 20 lbs.	15.00	@16.00
(Delivered New York)		
Boards—per ton—		
News	47.50	@50.00
Straw	53.50	@57.50
Chip	45.00	@47.50
Binders' Boards	70.00	@75.00
Sgl. Mla. Ll. Chip	57.50	@60.00
Wood Pulp	80.00	@85.00
Container	65.00	@70.00

Mechanical Pulp

(Ex-Dock)

No. 1 Imported—		
Moist	30.00	@32.00
Dry	34.00	@36.00
(F. o. b. Mill)		
No. 1 Domestic	27.00	@30.00
Screenings	15.00	@20.00

Chemical Pulp

(Ex-Dock, Atlantic Ports)

Sulphite (Imported)—		
Bleached	3.50	@ 4.50
Easy Bleaching	3.05	@ 3.25
No. 1 strong unbleached	2.60	@ 2.85
Mitscherlich unbleached	2.65	@ 3.40
No. 2 strong unbleached	2.50	@ 2.70
No. 1 Kraft	2.70	@ 2.90
Sulphate—		
Bleached	3.75	@ 4.00
(F. o. b. Pulp Mill)		
Sulphite (Domestic)—		
Bleached	3.40	@ 4.75
Easy Bleaching Sulphite	2.85	@ 3.05
News Sulphite	2.50	@ 2.70
Mitscherlich	3.25	@ 3.75
Kraft (Domestic)	2.70	@ 3.40
Soda Bleached	3.50	@ 3.75
Sulphate Screenings—		
Coarse	.75	@ .85
Refined	1.50	@ 1.85

Domestic Rags

New Rags

Prices to Mill f. o. b. N. Y.

Shirt Cuttings—		
New White, No. 1	12.00	@12.50
New White, No. 2	8.00	@ 8.50
Silesias No. 1	7.25	@ 7.75
New Unbleached	10.75	@11.25
Washables	4.25	@ 4.75
Fancy	5.50	@ 6.00
Blue Overall	7.25	@ 7.75
New Blue Prints	5.25	@ 5.50
New Soft Blacks	5.25	@ 5.75
Mixed Khaki Cuttings	4.50	@ 5.25
Pink Corset Cuttings	9.50	@10.00
O. D. Khaki Cuttings	5.25	@ 5.75
Men's Corduroy	3.75	@ 4.25
New Mixed Blacks	3.50	@ 3.75

Old Rags

White, No. 1—		
Repacked	5.75	@ 6.10
Miscellaneous	4.75	@ 5.25
White, No. 2—		
Repacked	3.25	@ 3.75
Miscellaneous	2.75	@ 3.00
St. Soiled, White	2.50	@ 2.75
Thirds and Blues—		
Repacked	2.25	@ 2.50
Miscellaneous	1.75	@ 2.00
Black Stockings	3.25	@ 3.75
Roofing Rags—		
Cloth Strippings	1.65	@ 1.75
No. 1	1.65	@ 1.75
No. 2	1.35	@ 1.45
No. 3	1.25	@ 1.35
No. 4	1.25	@ 1.35
No. 5A	.95	@ 1.05

Foreign Rags

New Light Silesias	7.00	@ 7.50
Light Flannelettes	7.75	@ 8.50
Unbleached Cottons	10.00	@11.00
New White Cuttings	10.50	@11.50
New Light Oxfords	7.00	@ 7.50
New Light Prints	5.50	@ 6.50
New Mixed Cuttings	3.00	@ 3.50
New Dark Cuttings	2.75	@ 3.25
No. 1 White Linens	7.00	@ 7.75
No. 2 White Linens	5.25	@ 6.00
No. 3 White Linens	4.00	@ 4.50
No. 4 White Linens	3.00	@ 3.50
Old Extra Light Prints	2.75	@ 3.25
Ord. Light Prints	2.25	@ 2.50
Med Light Prints	1.85	@ 2.10
Dutch Blue Cottons	2.25	@ 2.50
German Blue Linens	2.50	@ 2.75
German Blue Cottons	2.00	@ 2.25
Checks and Blues	1.75	@ 2.00
Lindsay Garments	1.80	@ 1.85
Dark Cottons	1.65	@ 1.70
Shoppery	1.50	@ 1.60
French Blues	2.25	@ 2.50

Old Rope and Bagging

Prices to Mill f. o. b. N. Y.

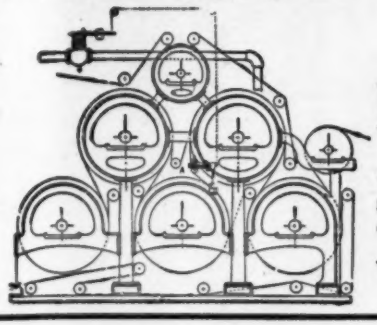
Gunny No. 1—		
Foreign	1.75	@ 1.85
Domestic	1.80	@ 1.90
Wool Tares, light	1.60	@ 1.70
Wool Tares, heavy	1.60	@ 1.70
Bright Bagging	1.60	@ 1.70
Small Mixed Rope	1.50	@ 1.65
Manila Rope—		
Foreign	3.75	@ 4.00
New Burlap Cut	3.00	@ 3.25
Hessian Jute Threads—		
Foreign	3.50	@ 4.00
Domestic	3.25	@ 3.50

Old Waste Papers

(F. o. b. New York)

Shavings—		
Hard, White, No. 1	3.40	@ 3.60
Hard, White, No. 2	3.00	@ 3.15
Soft, White, No. 1	2.80	@ 3.00
Flat Stock—		
Stitchless	1.25	@ 1.35
Overissue Mag.	1.25	@ 1.35
Solid Flat Book	1.15	@ 1.25
Crumpled No. 1	.80	@ .90
Solid Book Ledger	1.90	@ 2.10
Ledger Stock	1.40	@ 1.50
New B. B. Chips	.45	@ .55
Manilas—		
New Env. Cut	2.40	@ 2.60
New Cuttings	1.60	@ 1.85
Extra No. 1 old	1.25	@ 1.35
Print	.65	@ .75
Container Board	.50	@ .55
Bogus Wrapper	.70	@ .80
Old Kraft Machine Compressed bales	2.00	@ 2.10
News—		
No. 1 White News	1.50	@ 1.60
Strictly Overissrue	.65	@ .75
Strictly Folded	.47½	@ .52½
No. 1 Mixed Paper	.37½	@ .42
Common Paper	.25	@ .30

The Pickles Drying Regulator



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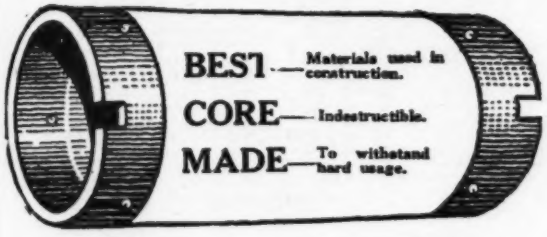

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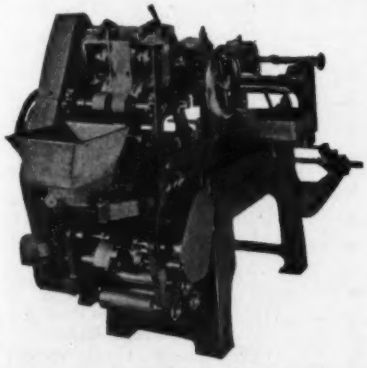

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Twines

F. o. b. Mill

Cotton—			
No. 1	.28	@	.29
No. 2	.26	@	.27
No. 3	.24	@	.25
B. C., 18 basis	.38	@	.40
A. B. Italian, 18 basis	.48	@	.53
Finished Jute—			
Dark 18 basis	.24	@	.25
Light 18 basis	.27	@	.28
Jute Wrapping, 3-6 Ply—			
No. 1	.21	@	.23
No. 2	.20	@	.22
Tube Rope—			
4-ply and larger	.18	@	.19
Fine Tube Yarn—			
5-ply and larger	.23	@	.27
4-ply	.24	@	.28
3-ply	.26	@	.30
Unfinished India—			
Basis	.16	@	.17
Paper Makers Twine			
Balls	.13	@	.15
Box Twine, 2-3 ply	.17	@	.19
Jute Rope	.21	@	.23
Ameri. Hemp, 6	.29	@	.31
Sisal Hay Rope—			
No. 1 Basis	.18	@	.20
No. 2 Basis	.16	@	.18
Sisal Lath Yarn—			
No. 1	.16	@	.18
No. 2	.14	@	.16
Manila Rope	.24	@	.26

CHICAGO

All Rag Bond	.35	@	.41
No. 1 Rag Bond	.25	@	.35
No. 2 Rag Bond	.14	@	.25
Water Marked Sulphite Bond	.09	@	.12
Sulphite Bond	.06¾	@	.11
Superfine writing	.18	@	.24
No. 1 fine writing	.14	@	.18
No. 2 fine writing	.12	@	.14
No. 3 fine writing	.08½	@	.12
No. 1 M. F. Book	.06½	@	.07¾
No. 2 M. F. Book	.05¼	@	.06¾
No. 1 S.&S.C. Book	.06¾	@	.07¾
No. 2 S.&S.C. Book	.05¾	@	.06½
Coated Book	.07½	@	.12
Coated Label	.07½	@	.10
News—Roll, mill	.03½	@	.04¼
News—Sheets, mill	.03¾	@	.04¾
No. 1 Manila	.04¼	@	.05¾
No. 1 Fibre	.04¾	@	.05¾
No. 2 Manila	.04¼	@	.04¾
Butcher's Manila	.04	@	.04½
No. 1 Kraft	.05¾	@	.06¼
Southern Kraft	.04½	@	.05
No. 2 Kraft	.05	@	.05¼
Wood Tag Boards	.04¼	@	.06¼
Sulphite Screenings	.03	@	.03¼
Manila Tissue—			
24x36 Sheet	.07	@	.07¾
White Tissue—			
20x30 sheet	.07¼	@	.07½
Boards, per ton— (Delivered Central Territory—			
Plain Chip	45.00	@	47.50
Solid News	47.50	@	—
Manila Line Chip	55.00	@	57.50
Container Lined— (Delivered Central Territory)—			
85 Test	65.00	@	70.00
100 Test	70.00	@	75.00

Old Papers

F. o. b. Chicago

Shavings—			
No. 1 Hard White	3.60	@	3.70
White Env. Cuttings	3.60	@	3.70
No. 1 Soft Shavings	2.90	@	3.00
No. 1 Mixed	1.35	@	1.45
No. 2 Mixed	1.05	@	1.10
Ledger & Writings	1.45	@	1.60
Solid Books	1.20	@	1.30
Blanks	1.65	@	1.75
Krafts	1.80	@	1.90
New Kraft Cuts	2.25	@	2.35
Manila Envelope Cuttings	2.00	@	2.10
Ex. No. 1 Manila	1.55	@	1.65
Print Manila	.80	@	.90
Folded News (overissue)	.65	@	.75
Old Newspapers—			
No. 1	.55	@	.60
No. 2	.50	@	.55
Mixed Papers—			
No. 1	.55	@	.60
Roofing Stocks— F. o. b. Chicago, net cash			
No. 1	30.00	@	—
No. 2	28.00	@	—

BOSTON

Paper

F. o. b. Mill

Ledgers—			
Sulphite	.07½	@	.15
Rag content	.15	@	.30
All rag	.38	@	.52½
Bonds—			
Sulphite	06½	@	.11½
Rag content	.15	@	.30
All rag	.36½	@	.65
Writings	.07	@	.20
Superfines	.11	@	.31
News	.03½	@	.04
Book, Super	.06	@	.09
Book, M. F.	.05¾	@	.08½
Book, Coated	.08½	@	.20
Coated Litho	.09	@	.12
Label	09½	@	.15
Jute Manila No. 1	.11	@	.13
Manila, Sul. No. 1	.04¾	@	.06½
Manila, Sul. No. 2	.03¾	@	.04½
No. 1 Kraft	.05¾	@	.06½
No. 2 Kraft	.04¾	@	.05¾
Common Bogus	.02	@	.02½
Delivered New England points			
Straw Board, rolls .009			57.50
Straw Board in Sheets, basis 35s to 70s			53.50
Filled News Board			47.50
Chip Board			45.00
Single Manila Pulp lined board	55.00	@	60.00
Single White, patent coated board bender	75.00	@	80.00
Wood Pulp Board	80.00	@	85.00
Binder Boards	70.00	@	75.00
(F. o. b. Mills)			
Tarred Felts— Regular, carload lots	65.00	@	—

Old Papers

F. o. b. Boston

Shavings—			
No. 1 Hard White	3.15	@	3.30
White Blank News	1.40	@	1.50
Manila Env. Cuttings	2.00	@	2.25
No. 2 Hard White	3.00	@	3.25
No. 1 Soft White	2.85	@	3.00
No. 1 Soft White	2.75	@	3.00
No. 1 Mixed	1.10	@	1.15
No. 2 Mixed	.85	@	.90
Solid Ledger Stock	2.00	@	2.25
No. 1 Books, Heavy	1.17½	@	1.30
No. 1 Books, Light	—	@	1.15
No. 1 New Manila	2.25	@	2.50
No. 1 Old Manila	1.40	@	1.60
Print Manila	.70	@	.80
Old Kraft	1.75	@	1.90
Overissue News	.55	@	.60
Old Newspapers	.45	@	.50
No. 1 Mixed Paper	.45	@	.50
Box Board, Chip	.45	@	.60

Bagging

Price f. o. b. Boston

Gunny No. 1—			
Foreign	1.50	@	1.60
Domestic	1.50	@	1.60
Manila Rope—			
Foreign	3.50	@	3.75
Domestic	4.00	@	4.37½
Mixed Rope	1.05	@	1.15
Scrap burlaps	1.35	@	—
Wool Tares, heavy	1.40	@	1.60
Mixed Strings	.90	@	1.05
New Burlap Cutting	2.15	@	2.25

Domestic Rags (New)

Price f. o. b. Boston

Shirt Cuttings—			
New White No. 1	.11¼	@	.11½
Silesias, No. 1	.07	@	.07½
New Unbleached	.10	@	.10½
Fancy	.05¾	@	.06
Washable	.04½	@	—
Cottons—According to Grades—Blue—			
Blue Overalls	—	@	.07
New Black, soft	.04	@	.04¼
Khaki Cuttings	.05	@	.05¼
Corduroy	.03	@	.03½
New Canvas	.09	@	.10

Domestic Rags (Old)

Price f. o. b. Boston

White No. 1—			
Repacked	5.00	@	5.25
Miscellaneous	5.00	@	—
White No. 2—			
Repacked	.04½	@	.05
Miscellaneous	.03½	@	.04
Thirds and Blues—			
Repacked	2.12½	@	2.37½
Miscellaneous	1.75	@	1.90
Roofing Stock—			
No. 1	1.57½	@	—
No. 2	1.32½	@	—
No. 3	1.22½	@	—
No. 4	1.12½	@	—

PHILADELPHIA

Paper

F. o. b. Mill

Bonds	.07	@	.40
Ledgers	.11	@	.40
Writings—			
Superfine	13	@	.18
Extra fine	—	@	.22
Fine	.20	@	.26½
Fine, No. 2	16	@	.25
Fine, No. 3	.12	@	.20
Book, M. F.	.06¾	@	.07
Book, S. S. & C.	.06	@	.07½
Book, Coated	.11	@	.16
Coated Lithograph	.09	@	.12
Label	.09	@	.12
News	.03¾	@	.04
No. 1 Jute Manila	.09½	@	—
Manila Sul., No. 1	.04½	@	.06
Manila, No. 2	.04	@	.04½
No. 2 Kraft	.05	@	.05¾
No. 1 Kraft	.06	@	.06¼
Common Bogus	.02¾	@	—
Straw Board	60.00	@	65.00
News Board	45.00	@	50.00
Chip Board	40.00	@	42.00
Wood Pulp Board	4.50	@	5.00
(Carload Lots)			
Binder Boards—			
No. 1, per ton	85.00	@	90.00
No. 2, per ton	70.00	@	75.00
Carload lots	60.00	@	65.00
Tarred Felts—			
Regular	66.00	@	58.00
Slaters	70.00	@	72.00
Best Tarred, 1-ply (per roll)	1.85	@	1.95
Best Tarred, 2-ply (per roll)	1.55	@	1.70
Best Tarred, 3-ply	2.10	@	2.15
No. 1 Mixed Paper	.65	@	.70

Domestic Rags (New)

Price to Mill, f. o. b. Phila.

Shirt Cuttings—			
New White, No. 1	.11½	@	.12
New White, No. 2	.07	@	.07½
Light Silesias	.07	@	.07½
Silesias, No. 1	.07½	@	.08
Black Silesia, soft)	.05	@	.05½
New Unbleached	.10½	@	.11
Washable	.04	@	.04½
Fancy	.05½	@	.06
Cottons—according to grades—			
Blue Overall	.07½	@	.08
New Blue	.03½	@	.04
New Black Soft	.05½	@	.06
New Light Seconds	.03	@	.03½
Khaki Cuttings	.04½	@	.05
Corduroy	.03	@	.03¼
New Canvas	.08	@	.09
New Black Mixed	.05	@	.05½

Bagging

F. o. b. Phila

Gunny, No. 1—			
Foreign	1.75	@	2.00
Domestic	1.75	@	2.00
Manila Rope	4.25	@	4.50
Sisal Rope	1.25	@	2.00
Mixed Rope	1.25	@	1.50
Scrap Burlaps	1.75	@	2.00
Wool Tares, heavy	2.00	@	2.25
Mixed Strings	1.50	@	1.75
No. 1, New Light Burlap	2.25	@	2.50
New Burlap Cuttings	2.25	@	2.50

Old Papers

F. o. b. Phila.

Shavings—			
No. 1 Hard White	3.50	@	3.60
No. 2 Hard White	3.00	@	3.25
No. 1 Soft White	2.80	@	2.90
No. 2 Soft White	1.90	@	2.00
No. 1 Mixed	1.50	@	1.60
No. 2 Mixed	.90	@	1.00
Solid Ledger Stock	1.90	@	2.00
Writing Paper	1.65	@	1.75
No. 1 Books, heavy	1.15	@	1.20
No. 2 Books, light	.80	@	.85
No. 1 New Manila	2.40	@	2.50
No. 1 Old Manila	1.50	@	1.60
Print Manila	1.00	@	1.10
Container Manila	.75	@	.80
Old Kraft	2.00	@	2.20
Common Paper	.40	@	.50
No. 1 Mixed Paper	.50	@	.60
Straw Board, Chip	.60	@	.65
Binders Board, Chip	.60	@	.65
Overissue News	.75	@	.80
Old Newspaper	.50	@	.60

Domestic Rags (Old)

White, No. 1—			
Repacked	5.00	@	5.25
Miscellaneous	4.75	@	5.00
White, No. 2—			
Repacked	.03½	@	.04
Miscellaneous	.02	@	.02¼
Thirds and Blues—			
Repacked	2.50	@	2.75
Miscellaneous	1.75	@	2.00
Black Stockings	3.25	@	3.50
Roofing Stock—			
No. 1	1.55	@	1.65
No. 2	1.40	@	1.50
No. 3	1.25	@	1.35
No. 4	1.20	@	1.30
No. 5A	.90	@	1.00
B	.80	@	.90
C	.80	@	.90

TORONTO

Paper

F. o. b. Mill

Bond—			
No. 1 Sulphite	.12½	@	—
No. 2 Sulphite	.10¾	@	—
No. 1 Colored	.13½	@	—
No. 2 Colored	.11¾	@	—
Ledgers (sulphite)	—	@	—
Ledgers, No. 1	.36	@	—
Ledgers, No. 2	.27	@	—
Writing	.09½	@	.10
News f. o. b. Mills—			
Rolls (Carloads)	3.25	@	—
Sheet (carload)	3.75	@	—
Sheets (2 tons or over)	4.00	@	—
Book—			
No. 1 M. F. (carLoads)	7.75	@	—
No. 2 M. F. (carloads)	7.50	@	—
No. 3 M. F. (carloads)	7.25	@	—
No. 1 S. C. (carloads)	8.25	@	—
No. 2 S. C. (carloads)	8.00	@	—
No. 3 S. C. (carloads)	7.75	@	—
No. 1 Coated and litho	14.50	@	—
No. 2 Coated and litho	13.50	@	—
No. 3 Coated and litho	12.75	@	—
Coated tinted	.15	@	—
Wrapping—			
Rag Brown	4.85	@	—
White Rap	5.25	@	—
"B" Manila	5.65	@	—
No. 1 Manila	6.65	@	—
Fiber	6.65	@	—
Kraft, M. F.	7.20	@	—
M. G.	7.35	@	—

Pulp

(F. o. b. Mill)

Ground wood	30.00	@	31.00
Sulphite easy bleaching	60.00	@	65.00
Sulphite news grade	55.00	@	60.00
Sulphite, bleached	78.00	@	80.00
Sulphate	65.00	@	—

Old Waste Paper

(In carload lots, f. o. b. Toronto)

Shavings—			
White Env. Cut	3.30	@	—
Soft White Book Shavings	3.00	@	—
White Blk, News	1.40	@	—
Book and Ledger—			
Flat Magazine and Book Stock (old)	1.25	@	—
Light and Crumpled Book Stock	1.10	@	—
Ledgers and Writings	1.40	@	—
Solid Ledgers	1.40	@	—
Manilas—			
New Manila Cut	1.50	@	—
Printed Manilas	1.00	@	—
Kraft	2.25	@	—
News and Scrap—			
Strictly Overissue	.80	@	—
Strictly Folded	.47½	@	.52½
No. 1 Mixed Paper	.37½	@	.42

Domestic Rags

(Price to mills, f. o. b. Toronto)

No. 1 White Shirt Cuttings	.12	@	.12½
Fancy Shirt Cuttings	.06	@	.06¼